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IN THIS ISSUE

Summester Development Education Programme	1
Higher Education and Indian Social Reality	3
Use of Unfair Means at Examinations	9
Evolving a New Academic Culture	14
A Unique Girls College in Rural India	15
Convocation	
Kuvempu University, Jnana Sahyadri (Karnataka)	16
Campus News	
Teacher Development Programme	20
IGNOU Plans Reorientation	21
Self-sustaining Model for a Village Library	22
Training Programme on Manpower Planning	22
Correspondence Course in Computer Applications	22
Agreement on Academic Exchanges	23
News from UGC	
Countrywide Classroom Programme	25
Book Review	27
Research in Progress	29
Theses of the Month	31
Education News Index	33
Classified Advertisements	36

Opinions expressed in the articles are those of the contributors and do not necessarily reflect the policies of the Association.

Editor :
SUTINDER SINGH

Summester Development Education Programme

H.G.S. Arulandram*

Introduction

The National Policy on Education 1986, and the Acharya Ramamurti Committee which reviewed it, strongly recommend that education should be made socially relevant and meaningful. The Acharya Ramamurti Committee observes that our present system of education is mostly confined to the four walls of a school or college; is tied down to textbooks and examinations; has failed to equip our students with any productive skills; and cuts them off from their natural and social environment, as a result of which the students become aliens to their own community and worst of all, they lose faith in life itself, and all that it should mean and therefore it strongly pleads for a new education, an education for life -- which education could become a fit instrument for national reconstruction, and inspire the youth to higher endeavours.

The University Grants Commission, while agreeing with the general view that the existing courses in the universities by and large do not bear much relevance to the national and social needs and requirements, suggests introduction of new programmes to reflect the recent developments in the various disciplines, placing greater emphasis on field studies and linking theory with practice.

Gone are the days when adult education, extension education, continuing education, population education, etc. were considered as extension activities in higher education. Today these have been brought under one banner -- Development Education. Not only has it acquired greater importance but has virtually become the third dimension in Higher Education. Therefore there has been a constant plea that Development Education should be brought under curriculum of all the courses, wherever possible.

Mass Action for National Regeneration (MANAR)

In July 1990 Prof. Yash Paul, the then UGC Chairman mooted the proposal -- Mass Action for National Regeneration. MANAR primarily aimed at removing illiteracy by utilising the services of the university and college personnel, in particular their students. Even though literacy was the main thrust, MANAR envisaged that in the process, the university and college students could serve as the carriers and functionaries of Functional Literacy Movement. Further, MANAR programme was also meant to be linked with poverty alleviation, national integration, environment consideration, energisation of the cultural creativity of the people, observance of small family norms and promotion of women's equality, etc.

Summester Development Education Programme (SDEP)

In order to fall in line with the MANAR programme in good spirit in our

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universities, it is suggested that universities could launch Summer Development Education Programme (SDEP) in their affiliated colleges. It is suggested that a course in "Development Education" leading to the award of a Diploma in Development Education may be designed and thrown open to all the first year undergraduate students. The course could be conveniently taken in two consecutive summer vacations, in addition to their regular study for a Bachelor's degree.

Course Objectives

The major objectives of the SDEP are as follows :

1. To sensitise the students to the nation's current problems.
2. To minimise the socio-economic differences that create class conflicts.
3. To fill the gap between the theory and practice of education.
4. To make the students aware of their vast potentialities and responsibilities.
5. To arrange for the students to come face to face with our rural people.
6. To provide chances to the students to experience and encounter the realities of their life.
7. To permit the students to test their classroom knowledge with the social reality.
8. To encourage the students to analyse the various forces operative in our society.
9. To pave way for the students to acquire maturity in all human qualities through involvement.
10. To mould the students as effective instruments for the all round development of their community; the state in particular and the nation in general.

Modalities

1. The SDEP will consist of two modules which could be taken by the students in two consecutive summer vacations. The course duration in each summer vacation shall be of eight weeks consisting of lectures, field work, survey, data collection and intensive practical work in imparting functional literacy to the villagers. The candidates shall also

be required to submit a project report at the end of their third year of study.

2. The necessary curriculum may be designed to suit the local and community needs.
3. The course shall be offered in a rural setting identified by the college in consultation with the local authorities there. It shall be residential in nature and so it is obligatory on the part of the students to be residential candidates throughout the course.
4. SDEP is being offered as a summer course, so a few faculties in the participating colleges have to be involved in it. This will result in not only the increase of the workload of the teachers but also foregoing of summer vacations : so suitable mechanism should be devised as compensation for the teachers involved in this programme.
5. Incentives to the participating staff members by way of honorarium for the lectures taken may also be given besides the concessions extended.
6. The participating students may also be given some incentive such as preference in admission in PG courses.

Financial Implications

1. SDEP is to be offered as a residential course of study; it will be obligatory on the part of the students to pay the prescribed fee for admission into the course.
2. The government may be requested to provide liberal matching grants to the participating colleges to meet expenses of the programme.
3. The university may also, if possible, earmark a substantial amount for this programme.
4. Various donor agencies may be approached for financial and technical support.

Conclusion

It is believed that if SDEP is introduced in the universities, it will not only be an effort to bring in extension services into regular academic programmes but also will serve as meaningful exercise to make education socially relevant and life-oriented.

Higher Education and Indian Social Reality

An Overview

S.P. Pumalekar*

That education has potentials to contribute to social development is well comprehended by the Indian planners and policy makers. History of educational reforms including the underlying debates is a testimony to this knowledge. Looking back into our immediate past, there is a legacy of 1968 National Policy of education. That marks a significant step forward in the history of education.

The 1968 policy document aimed,

'to promote national progress, a sense of common citizenship and culture, and to strengthen national integration. It laid stress on the need for a national reconstruction of the education system, to improve its quality at all stages, and gave much greater attention to science and technology, the cultivation of moral values and a closer relation between education and the life of the people' (*University News* : 1986).

But awareness and concern have to be translated into action. That action can be in the form of a scheme, project, activity or a programme. Again, action at the ground level has to be judiciously evaluated in terms of its efficacy, outreach and social productivity (*Jenks* : 1977). It is on this terrain that we come face to face with series of constraints and setbacks.

There are, in my view, three important questions to ask : These are (i) Have we used our ground level experiences to alter our educational approach, perception and methodology?; (ii) Have we in the real sense enlisted the support and cooperation of the masses in formulating the design and operational framework of our educational system and utilise the community initiatives to implement them?; and (iii) Have we correctly grasped the class and gender roots of our educational institutions, type of social knowledge and ideological worldviews generated through them?

These are very crucial questions which we need to explore, if we expect education to serve the needs and interests of our society; and especially of those belonging to weaker sections, namely, the Scheduled Castes,

Scheduled Tribes, the poor peasants, workers, women and other socially marginalised segments. We need to recall that when we achieved freedom from the British rule, we had given a pledge to the common masses to elevate their social and economic status.

Educating them with best possible resources at our command is one of the powerful instruments to bring about social change in and through the common masses. Some countries have already achieved this distinction. Cuba is one of them. Experiences reveal that in India we have not much succeeded on this front. Necessity to evolve New Education Policy (NEP) is to some extent an admission that there were serious gaps and shortcomings in the old policy design and operational framework.

The NEP must then be conceived as a response to changing social needs and anxieties relating to education including higher education. Prior to the NEP, a committee consisting of three eminent educationists was set up and they have brought out in August 1985 a document, *Challenge of Education : A Policy Perspective*. It is highlighted that this document "brought out in bold relief various ills and shortfalls affecting the system".

The present paper concentrates on critical gaps prevailing in higher education in India. It also points out inadequacies in the domain of dissemination of socially relevant knowledge. In discussing these we make use of data and experiences of higher educational institutions in western India and we present them in qualitative format. Secondly, we keep in view the NEP document to underscore some salient features of the present system, its snags as well as its potentialities.

There are certain revealing aspects with regard to growth of higher education in India. Since Independence, there has been a quantitative expansion of higher education. There are now more than 200 universities. In 1988-89, there were 6912 colleges, including 4600 affiliated colleges. There was an increase of 1322 colleges in 5 years time, i.e. since 1984-85. That means, every year some 250 to 300 new colleges were being set up in different parts of the country.

We learn that the NEP intends to go slow in respect of expansion of higher education. The NEP document reiterates that "in view of the need to effect an all round

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improvement in these institutions, it is proposed that, in the near future, the main emphasis will be on the consolidation of, and expansion of facilities in the existing institutions" (*University News*: 1986).

As time progressed, there has been a quantitative downgrading of the standards in some critical spheres of knowledge transmission. Hence there has been serious thinking on improving quality of higher education. Adoption of syllabi revision, innovative teaching methods, university leadership programmes, provision of upgraded technological gadgets, etc. is a result of such thinking. The Open University experiment has been initiated to augment opportunities and to decentralise the higher education.

Kothari Commission (1966) laid great deal of stress on the qualitative improvements in higher education and on linking it with other sectors of society and economy. New Education Policy (NEP) document has expanded on this theme of quality upgradation and character building through higher education. The NEP also emphasises on cultural dimensions of life and pluralist nature of Indian society.

The NEP is aware that there is a schism between the formal system of education and country's rich and varied cultural traditions. It boldly asserts that, "the preoccupation with modern technologies cannot be allowed to sever our new generations from the roots in India's history and culture." Long ago Tagore had also echoed similar feelings.

"the highest mission of education is to help us realise the inner principle of unity of all knowledge and all the activities of our social and spiritual being."

Are we moving towards this goal? Have we seriously examined the implications of character and contents of higher education for the formation of 'personality' of the students, the citizens in making? Jayaprakash Narayan, disillusioned as he was by the performance of formal system of education, wrote as early as in 1978.

"...unfortunately, the formal system of education which we have created for ourselves does not serve either of these functions (namely, individual growth and social transformation). On the one hand, it gives wrong education to the upper and middle classes who are its principal beneficiaries. It makes them aliens to their own culture through the adoption of the values and life-styles of a consumption oriented industrial society. It also converts them into a parasitic class which perpetuates and even intensifies the poverty of the masses ..." (*Citizens for Democracy*: 1978).

Expansion of higher education has led to somewhat

disturbing developments. High schools and colleges are being established at district and taluka towns. Even some bigger *Kasbas* (Market villages) in some states have colleges or technical schools. For the rural population, these are 'new' institutions in their midst. This also means that higher education facility is brought closer to rural population.

What has been the rate of utilisation of this facility among different sections of rural society? Whether the utilisation is biased towards male members of the rural society? These questions are vital to explore. Broadly the available meagre evidence suggests that upper and middle castes and classes have been able to utilise the facility better and also with distinct advantages in employment sector than their counterpart i.e. the lower classes. Also the girls seem to be far behind the boys in utilising the higher education facilities launched in the semi-urban or rural areas; some studies indicate (*Punalekar*: 1985).

Again this observation needs to be examined in a wider socio-economic context. More and more historical studies and empirical investigations need to be conducted to examine the distribution of benefits of higher education among various socio-economic groups (*Aparna Basu*: 1974). In this respect, some available reflections of scholars are encouraging. For instance, writing on the educational situation of the SC and ST students in Maharashtra, Suma Chitnis has categorically stated that the poor performance of the SC and ST students at school and college is due partly to their poverty and partly to the fact that they belong to subcultures that have traditionally been excluded from education. She later argues that,

handicaps emerging out of these two distinctly different sources of educational backwardness merge to create a cumulative obstacle in the educational careers of Scheduled Caste and Scheduled Tribe students" (*Suma Chitnis*: 1969).

One has also to closely observe the spread of education among the girls who, a few decades ago, were outside the education field. What is the rate of literacy among the females? What has been their performance at various levels i.e. primary, secondary, higher secondary and in the professional institutions? Which subjects do they prefer at higher levels and why? Investigations on these questions might provide us with necessary knowledge regarding the social values and practices prevailing among various socio economic groups as regards female education.

Two more relevant areas where sufficient information does not exist are: 1) experiences and perceptions of the socio-economically backward classes towards

higher education, and 2) nature, composition and functions of the institutional leadership vested with the task of managing the institutions of higher learning, i.e. high schools, colleges and specialised institutes imparting education in various professional subjects like management, engineering, architecture, home science, etc. The latter area is crucial for the stability and growth of higher educational institutions (*Rudolph and Rudolph : 1972*).

Of late, we are noticing the instances of tensions between the students and the 'Managers' or 'Organisers' of higher educational institutions as well as the teachers and the college and university management. Why such tensions prevail is a question worth pursuing in a wider context of socio-political values and interests. There seem to be deeper reasons behind such instances. They relate to questions of power, authority and dominance within different sections of society including the teaching community.

More rigorous historical analysis is necessary to explore these trends and tendencies. Prof. Iqbal Narain who was a vice-chancellor in three major universities and with excellent reputation as an academic and administrator has drawn our attention to turbulent side of the university affairs in his recent book "*Pages from the Vice-Chancellor's Diary*". This is a document with transparent reflections and logic (*Iqbal Narain : 1991*).

Positivist position on such issues is unlikely to offer any meaningful solutions, as it takes the prevailing organisation of institutional process as 'given', thereby accepting the definition of 'social problems' provided by the authorities (*Mardle : 1977*). There is another danger in such analysis, as Gouldner has already warned. "Positivist approach identifies institutional conflict in an internal, pathological vacuum, rather than as a reflection of the wider contradictions within the centralised forms of political and economic control" (*Bourdieu and Passeron : 1977*).

Barring few exceptions, the students coming to higher educational stream are less equipped to cope up with the academic demands. They lack an elementary confidence or ability to question. They also lack the reading and writing habits. Their dependence on the textbooks and guide books is total, and little effort is made by them to consult other sources. Hence they remain in a narrow groove; trapped within spurious boundaries of knowledge and hopelessly dependent on outside so called knowledge industry which is out to overwhelm and subordinate them.

The teachers do not generally seem to view these deficiencies seriously. Neither do they view this disturbing environment as a challenge to their professional

ability; nor as an affront to their ethos or ethics as moulders of character and personality of the students. Rather, there is an element of surrender on their part. It is now often argued that the teachers tend to lower down criteria of their teaching competence. They try to increasingly adjust to the students, and in the process, lose an opportunity to generate concern for knowledge and scholarship.

This culture of adaptation and adjustment then becomes a ruling idea or a dominant ethos. A teacher who desires to deviate from this pattern and who wants to struggle to uphold creativity criteria is looked down upon or simply isolated by other teachers who constitute this mainstream of mediocrity. As a result, the conscientious teachers, minority as they are, are forced to lead a marginalised existence. None, neither the management nor the fellow-teachers, are keen to listen to them. Such frightening situation has begun to set in some places and concerted efforts alone can hopefully reverse these unhealthy trends. Prof. Iqbal Narain does mention about such corrosive tendencies in his memoir.

In some states, it is observed that the girls are discouraged by their parents (who in turn are supported by their friends and relatives) not to take up such courses as engineering, textile technology, architecture, etc. Instead, subjects such as home science, humanities, designing, etc. are specially promoted among the girls.

The NEP is cognisant of such tendencies, and hence it lays special emphasis on the removal of disparities and to equalise educational opportunities 'by attending to the specific needs of those who have been denied equality so far'.

The NEP further stresses that

"... in order to neutralise the accumulated distortions of the past, there will be a well conceived edge in favour of women. The National Education System will play a positive, interventionist role in the empowerment of women."

This it intends to bring about through redesigned curricula, textbooks, the training and orientation of concerned personnel and the active involvement of educational institutions.

Also it is observed that in socially backward groups such as the Scheduled Castes and Scheduled Tribes, smaller number of students pursue subjects like English, Mathematics and Science at high school level. Many students even seek (or motivated to seek) exemption from such subjects. This seriously restricts their entry and participation in professional courses such as engineering and medicine (*Punalekar : 1991*). This problem needs to be examined at a greater depth with focus on

conditions that prevail at primary and high school level for the socially and economically backward groups.

Indeed the prevailing situation generates a challenging task for the NEP implementors whose basic objective with reference to education of the SC population, is "equalisation with the non-SC population at all stages and levels of education, in all areas and in all the four dimensions — rural male, rural female, urban male and urban female".

Also there is a problem of social (and possibly economic) ranking of the subjects in social science field. There seems to be almost an all-India pattern where subjects like Economics, Commerce, Public Administration, Rural Studies, Political Science, etc. occupy dominant status in terms of students' preferences. On the other end of the scale are the subjects like Philosophy, History, Sociology, etc. which command very little acceptability and hence participation. Why does such ranking prevail? Does this scenario have long term effects on the social fabric? Does it have negative effects on the personality development of students? These questions need careful scrutiny.

All subjects are inter-linked, and given the will and motivation, it is possible to provide an integrated syllabi. The students of sociology, for instance, can be oriented in the basic principles and approaches of different philosophical schools. By this method, the students shall certainly stand to gain. Also the teachers of different disciplines can learn the valuable experience of multi-disciplinary collaboration. They can learn from each other. Such knowledge sharing is necessary and vital to the growth of higher education.

The cardinal principle which is 'the key' to the NEP is viewing education as "a unique investment in the present and the future". But in considering this principle, prevailing student-teacher relationship cannot be overlooked or even underemphasised. This relationship does not appear to be always tranquil and viable. The students are not always the seekers of knowledge and the teachers, the givers of knowledge. There are some critical gaps.

The NEP maintains that education has an acculturating role. "... it refines sensitivities and perceptions that contribute to national cohesion, a scientific temper and independence of mind and spirit — thus furthering the goals of socialism and democracy enshrined in our constitution." Does the present day higher education fulfil the task of acculturation? This question needs to be probed in depth.

The syllabus is not always uptodate. The latest developments in the fields are not incorporated. The class-

room teaching remains the only or dominant method of imparting knowledge. Even classroom teaching is not stimulating. It begins and ends with a monologue. There is hardly any dialogue and discussion among the teachers and students.

No doubt that novel methods like seminars, workshops, tutorials, field work, etc. are introduced. But these are accepted mechanically and without sufficient reflection and motivation on the part of teachers and students. Hence we do not observe dynamic and productive participation of students in such assignments. There is an attitude of time serving on the part of both; the students as well as teachers. There is one-point examination orientation governing the activities of students, teachers and the administrators. This is not a healthy trend.

M.S. Gore, an eminent sociologist of education has aptly remarked :

"Creativity in education is a function of the methods of instruction that are adopted. Currently the teacher is anxious to cover portions from prescribed textbooks and to equip his students to answer the types of questions that are likely to be asked by the examiners. This system of external examination is supposed to ensure objectivity and impartiality. In actual fact it has led to the development of a purely verbal, textual kind of scholarship at best and to a rote learning of guide books at worst" (M.S. Gore : 1982).

There are others who have critiqued the higher education in India from another standpoint using dialectics of history. Leading among them is Krishna Kumar who has perceptively examined the modality and contents of knowledge and its transmission through formal educational system since colonial times. Aptly designating it as 'walled knowledge', Krishna Kumar argues that behind it was a vision of the civil society, based on eighteenth century English political ideas.

"Education enabled one to place oneself above the masses, intellectually and morally, and see oneself as a legitimate candidate for a share in the colonial state's power and the privileges that went with it" (Krishna Kumar : 1991).

A key attitude of the early educated elites was to look upon the labouring masses as a category set apart by certain features of behaviour and character (Hoggart: 1982). Even today there is no evidence of substantial change in these attitudes. Skills, insights, perceptions and experiences of the toiling masses do not get sufficiently reflected in formal educational system. Traditional *dais* and *vaidus* are ignored by the modern

medicine. *Gavandis* or *Kadlas* (i.e. masonry workers) have no place in modern house-building courses including architecture. Traditional fishermen, and forest dwellers have little space in modern knowledge systems of marine and forest sciences. Such examples can be multiplied.

There is a large gap between what is taught and what really exists. In Marathi language, autobiographies of Daya Pawar's '*Balur*' and Laxman Mane's '*Upard*' tell us so much about status and conditions of depressed castes and classes in Maharashtra. So also, recent autobiographies of Laxman Gaikwad entitled *Uchhalya*. Gaikwad belongs to the caste of *Santa-Muchlar* i.e. market thief. They are also known as *Berads* in some parts of Maharashtra and Karnataka. Narration is about struggles of a nomadic (ex-criminal) community against oppressive social structures in Marathwada region.

Other notable Dalit writers who have contributed immensely to sociological knowledge on existence of marginal groups and their worldviews are : Sonkamble, Uttam Bandu Tupe, Kharat, Kondvilkar, Limbale, Anabhau Sathe and Baburao Bagul in Maharashtra; and Joseph Macvan, Chandu Meheria, Neerav Patel, Atmaram Parmar, Raju Solanki, etc. in Gujarat (*Punalekar*, 1988). In other states like Karnataka, Andhra, U.P., etc., Dalit writers have emerged on the scene and have begun to demystify our social categories and assumptions about the lowest social strata in Indian society.

Dalit novels, stories, poetry, critical essays and autobiographical works are immensely relevant for the teachers and students of Sociology, Political Science, Rural Studies, Linguistics, Law and Social Philosophy. Their works should be prescribed as textbooks or as recommended readings in various courses.

It is gratifying to note that universities in Maharashtra have now prescribed works of Dalit writers at B.A. and M.A. level courses. A few students are researching this material for their M.Phil. and Ph.D. degree. These are hopeful signs indeed. But this process needs to be accelerated to bridge the gaps between knowledge and social reality.

The NEP document has now come up with the common core in a national curricular framework. The common core subjects or themes cover the following :

- (i) History of India's freedom movement,
- (ii) Constitutional obligations,
- (iii) Other elements of knowledge to promote values such as national unity, common cultural heritage, egalitarianism, democracy and secularism, equality of the sexes, protection of the environment, etc.

The NEP document also stresses that "all educa-

tional programmes will be carried on in strict conformity with secular values".

The knowledge is and should be all-encompassing, and without restrictive boundaries. There should be an exchange of insights and experiences between the subject and faculties (*Eggleston* : 1966). Such cooperative and collaborative efforts can and should be undertaken at the college and university level. Paul Freire has rightly stated that,

"knowledge emerges only through invention or re-invention, through the restless, impatient continuing, hopeful enquiry men pursue in the world, with the world and with each other".

To conclude, we have very limited options before us, and not much time-span to postpone the necessary reforms. The NEP document rightly observes that education in India stands at the cross roads today. "... Neither normal linear expansion nor the existing pace and nature of improvement can meet the needs of the situation". Ills and inadequacies of the system must be countered with renewed determination and vigour.

Policy documents become valuable tools of social transformation only when they are put into operation with serious concern and political will. The redeeming feature of the NEP is its timebound action plan setting out implementation and strategies. Let us hope that the NEP with its task forces and countrywide network of institutions begins to alter this depressing scene

We must acknowledge that higher education is a product of wider socio-economic and political network. Certain negative tendencies which afflict the higher education have roots in a wider socio-economic milieu. Only broader social and political movements can address to these distortions and correct them.

Social work methodologies or gradualist, reform-oriented policies have limited capacities to address to the serious core questions of control and dominance. As Cohen perceptively puts :

"... On the other hand there are some very effective short term possibilities not just through humanitarian work but in conscious policies of raiding the establishment for resources, contributing to its crises, unmasking and embarrassing its ideologies and pretensions ... One must be able to live with ambiguity and refuse to accept what the others, the authorities, demand in a choice between revolution and reform". (*Cohen* : 1975).

But certain tendencies are located at a micro level. They relate to the groups like students, teachers, managements, etc. These groups can together attempt to

counter these negative tendencies. Then, there can be better integration between the students and teachers, between the knowledge and social reality. Let us hope that the NEP and its implementors begin to size up the complexities arising out of social realities around, and begin to tackle the problems in collaborative and, if necessary, also combative spirit.

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Important Books on Population

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Use of Unfair Means at Examinations

Causes, Prevention and Remedies

Madan Mohan*

The phenomenon of use of unfair means at examinations is as old as the phenomenon of examinations itself. It flows from the human tendency to cheat in the normal life for material gains. Its variety and intensity vary from place to place and from time to time depending on the moral values cherished in a given social system, coupled with the political environment in the state/country which determines the view, lenient or strict, as the case may be, taken by the law and order authorities of such an offence.

The credibility or otherwise of examinations of a university or an educational institution depend on the arrangements made to prevent the use of unfair means at examinations, the number of cases of use of unfair means detected despite such measures and the punishment given for the offence committed.

Causes

There has been a fall in values all around. Whereas in earlier days the society would shun students resorting to malpractices in examinations, such a discouragement is not there these days. There has been tremendous increase in the crime rate, both in volume and variety, and the educational system has not remained immune from the same.

Gone are the days when some students only, who were marginal cases between 'fail' and 'pass', would resort to unfair means with a view to fall in the latter category. In this age of competition for jobs and for admission to higher courses, including professional courses, even good students would be tempted to use unfair means, given the environment and the situations to do so, to bring improvement in the percentage of marks to be obtained or for improvement from III Division to II or from II Division to I and so on. The position becomes worse when such students are helped by their parents/relations and friends from outside the examination centres and that too, sometimes, with the connivance of the examination staff, including teachers, on duty, at the examination centre.

The change in the pattern and composition of population of a town has meant a corresponding change in the

moral values upheld and respected in the area. Some years ago the population of Delhi mainly comprised 'service' class people. Recently it has become a city of 'business' class and the 'labour' class mostly coming from nearby and neighbouring states so that the moral values cherished then are quite different from those cherished now. The fall has been so deep and steep that what used to be an effort on the part of individual students to cheat, has taken the shape of mass-copying in which every one including students, teachers, parents, relations, friends and even the police personnel posted at examination centres, is involved. It is a 'free for all' stage.

In the name of 'social justice' and 'reformist attitude' towards youngsters, the punishment for the offence of unfair means has been made very mild, which, in the context of rules for passing the examination, means no punishment at all. For example, in Delhi University, for promotion from I Year to II Year, or from II Year to III Year, of an Honours Course, a student should secure at least 40% marks in one of the two papers of the main subject (irrespective of the performance in the second paper). The punishment prescribed for carrying unauthorised material into the examination hall is cancellation of the paper of the day of the examination. Therefore there is nothing at stake for a student detected in possession of unauthorised material during examination; at best his/her paper of the day of the examination will be cancelled. In spite of all this, he/she would be promoted to the next higher class on the basis of his/her performance in the other paper. In the cancelled paper, he/she can appear again, alongwith the papers of the next higher class, which in any case he/she would have done, in the event of normal failure in that paper. Thus 'failure' and 'cancellation of paper' due to malpractice have the same effect and the student still stands promoted otherwise.

The trade union activities of teachers in certain universities, during which they exploit students for their gains, and the teaching remains suspended for long durations, evoke sympathies in the minds of teachers during invigilation work of examinations and on the pretext that the students' studies had suffered for no fault of theirs, they ignore attempts on the part of students to use unfair means during examinations. Not only this, there have been cases where teachers are reported to have dictated answers to the whole class during examination hours.

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Students distinguishing themselves in sports and other co-curricular and extra-curricular activities, who have brought laurels to the college, is another 'privileged' category using unfair means at examinations. Instructions are given to the invigilators from the 'top' that such students should be shown 'sympathy' and made to 'pass'. In certain colleges all such students are huddled in one room, separately and at a distance from other students, so that it should not 'prick' anyone's 'conscience' when they take examination as if under 'open book' system.

In cases where use of unfair means may include violence or threat of violence later on, lack of adequate protection to invigilators and other staff, on the part of the university and/or lack of financial compensation in the event of death or injury resulting in permanent disability, or even reimbursement of medical expenses, also discourage good teachers from participating in examination work of conduct of examinations, or in the event of participation being made compulsory by declaring it as a part of normal duty of teachers, deter teachers from performing their duty sincerely and whole-heartedly.

In many universities, where such work is remunerative, the increase in the rate of remuneration, with the passage of time, has not kept pace with the raise in total emoluments of a teacher. For example, when the total emoluments of a teacher were Rs. 800 or so, the rate of invigilation fee was Rs. 12-15 per session. Now that the teacher's total emoluments are Rs 4000 or so per month, the rate of invigilation fee is Rs. 20-25 per session. Further, when income received for invigilation work is added to the total income of the teacher for the whole year, it results in higher rate of income tax for quite a few of them. On the other hand, the procedures followed during examination conduct have become much more cumbersome and complicated and the risks involved have become much greater.

A stage was reached when it was realised that it was necessary to seek assistance of the local police to keep off outside pressures from interfering with the conduct of examinations. While initially such a step became quite effective, in due course, the police personnel even developed sympathy for the students and they ignored or connived at outside attempts, individual as well as collective, to provide undue help to examinees inside 'for a price'. The protectors of law thus became the breakers of law.

The jurisdiction of civil/criminal courts and High Courts (even the Supreme Court in certain cases) to deal with appeals filed by students against punishment for use of unfair means is another impediment in the way of attracting sincere teachers towards examination work of invigilation. The tactics adopted by advocates of delaying proceedings in a court case, the equal footing at

which the appellants and the respondents are treated, without regard to the conventional respect that a student owes to a teacher, the personal accusations/character assassination in the appeals filed by students, which the teachers have to defend themselves against, in an open court, and the humiliation thus suffered by the teachers are too well known.

The ever-increasing number of students in colleges/universities necessitate setting up of more and more examination centres. In a hurry, new colleges have to be started in buildings which may be satisfactory for purposes of teaching, but which may not be of the required standard for conducting examinations. For example, if a college does not have a boundary wall, it may not affect teaching in any way, but the conduct of examinations is bound to suffer on account of this deficiency. In recent years, Delhi University experimented with requisitioning school buildings for examinations to cope up with increased number of examinees, particularly those belonging to the School of Correspondence Courses and non-collegiate categories, but laxity of direct control of the university over conduct arrangements led to many ills in the conduct of examinations. Only this year, leakage of a question paper of a major examination, involving thousands of examinees, occurred on the part of the Superintendent of Examination at one such examination centre. There is now a demand that the university should hold its examinations in its own buildings and/or colleges/institutions affiliated to it, and that too under the direct control and supervision of the Head of the Department/Dean of the Faculty or the Principal of the College/Institution, as the case may be.

The very purpose of education would be defeated if timely steps are not taken to stem the rot, at all levels — schools as well as colleges.

In one of the states, legislation has been passed to treat the use of unfair means at examinations a cognizable offence punishable under the law, whereby a person caught in the course of committing the offence is treated and tried in accordance with the provisions of the Cr. P.C. and punished under the I.P.C. (Indian Penal Code) with imprisonment for a specified period or fine or both. Such a treatment for the disease is too drastic. It may seem that in the beginning the legislation passed may reduce the number of cases of use of unfair means, in the long run it is going to add to the number of hardcore criminals in the state or the country. One is afraid of law till such time one has not known the limit of law. Once the limit of law is known the fear vanishes. Once the person is labelled a criminal, it is very unlikely that he/she would come back to life free of crime.

Prevention is always better than cure. Comprehensive and well thought of preventive measures will reduce such cases to the minimum which it will not be difficult to deal with.

Preventive Measures

The following steps are suggested to deal with the situation:

Care should be taken in fixing places as centres of examination. In Delhi a detailed study at the school level has revealed that examining students of a school in their own school, supervised by their own staff or staff drawn from other schools, has created more problems than when students were examined at a place other than their own school, supervised by teachers other than their own. Therefore, in the Central Board of Secondary Education (CBSE) they are continuing with the latter alternative i.e. students being examined at a school other than their own, supervised by outside teachers.

In the context of university examinations (Delhi University) the experience has been that the students when examined in their own college supervised by their own teachers, created less problems than when examined in a college other than their own, supervised by other teachers. In the university, therefore, they are following the former system.

Either system may be followed depending on local factors favouring the specific system. However, a variation of the two which is recommended for adoption is that the students may be examined in their own school/college supervised by teachers, of whom at least 50% (including the Deputy Superintendent) may be from other school(s)/college(s) and none of the teachers, internal as well as external, may belong to the subject in which the examination is being held on any day. This will eliminate temptation on the part of students to seek help from teachers invigilating in examination rooms by way of seeking clarification of questions asked in the question paper, or otherwise, the latter attempting to help the students for monetary considerations. In addition, teachers, both from within and outside, may not be the same persons throughout; they may be rotated and the same set of teachers may not be invigilating the same set of students for more than two days, as far as possible. There should always be a set of at least two teachers invigilating over a group of students, of whom at least one should be an external teacher. Further, assignment of rooms to invigilators on day-to-day basis be kept a closely guarded secret and it should be made known only when the teachers report for duty on the date of examination, for the session concerned in each case.

The university may prepare a panel of observers who may be senior teachers drawn from the university and colleges with aptitude/experience in the conduct of examinations, in advance, and put at least two observers on duty, each day, at each examination centre, for the entire duration of examination. It should be the responsibility of the observers to ensure that the examination in

the examination centre where they are posted is conducted strictly in accordance with the regulations of the university and other decisions taken in that behalf, from time to time. In the event of noticing any irregularity or breach of rules, they should point out the same to the Superintendent of Examinations for immediate rectification/remedial action. In case the Superintendent of Examinations fails to take the required action, senior officers in the university may be informed immediately for taking further appropriate action. The constitution of the team of observers may be changed from time to time and the same team of observers may not remain at one examination centre for more than two consecutive days at a time.

Each university should lay down guidelines, which should be satisfied, before a place is fixed as a centre of examination. Such places be visited by a high powered committee(s) set up by the university, every year, to ensure that a college/institution fulfils the requirements laid down before it is fixed as a centre of examination. It should be made one of the conditions of affiliation of a college to the university that the college would always satisfy the guidelines/requirements laid down by the university in that behalf.

Colleges which do not have boundary walls may not be made examination centres, as far as possible. Exclusively girls' colleges may not be made examination centres for male students. Similarly, exclusively boys' colleges may not be fixed as examination centres for female students.

As far as possible, the examination should not be held on the ground floor. The examinations and the office created for the purpose should be confined to the first floor of the building.

It should also be ensured that other activities in the college viz. holding classes, students and teachers visiting the college for other work, etc. are reduced to the minimum. In case such activities cannot be avoided, it should be ensured that entry to the examination rooms is segregated and adequately guarded.

Each examination centre should have a manageable number of examinees assigned to it (not more than 400 for any one session of examination). Wherever the number exceeds this limit, two or more examination centres, separate and independent, for all purposes, may be established in the same building.

In cases where students of one college appear at an examination centre other than their own college, or in the case of students belonging to the Correspondence Courses Scheme and other non-collegiate categories, their identity should be verified every day with reference to their attested photographs pasted on their Hall Tickets, attested copies of which may also be supplied separately to the examination centre, in advance.

All examinees, before entering the examination centre, should be subjected to physical search at the main gate of the college, everyday, by teachers, to eliminate the possibility of any unauthorised material finding entry into the examination centre.

Similarly, before the start of the examination every day (for each session) the examination rooms should be thoroughly inspected to ensure that no unauthorised material is lying in the desks/on the floors and nothing unauthorised is written on the desks/chairs and walls of the examination room.

The condition that in any room more than a specific number of invigilators may not be appointed, may not be insisted upon rigidly. The Centre Superintendent may be given the authority to relax this condition, with the prior approval of the university, or with the consent of the observers posted at the examination centre, depending on the local situation, the nature of the subject in which the examination is being held, the type of questions set in the question paper as also the type of students being examined, on day-to-day or session-to-session basis. Economy in expenditure has to be consistent with the required level of efficiency.

The same consideration should also apply in the matter of other staff (including security staff), depending on the physical condition of the building where examination is being held, its surroundings and the pressures from the outside to interfere with the conduct of the examination.

In no circumstances (including illness), the examination of any student be arranged at his/her residence, as has been the practice till recently. Change of examination centre should not be allowed under any circumstances whatsoever, except in well known cases of seriously handicapped students, in whose case also, change of examination centre be allowed, after a careful scrutiny, including such medical evidence as may be required, and that too, in a randomised manner.

In the case of students falling ill at the last minute, and therefore unable to take examination at the examination centre originally assigned, and/or necessitating the use of a writer etc., one or two rooms with sufficient number of sick-beds may be earmarked in the university's Health Centre where all such students may take examination, under medical care and properly centralised invigilation arrangement. Any additional expenses on this account may be borne by the examinees concerned.

Remedial Measures

In order to attract teachers and to make them put in their best in the work of invigilation, the rates of remuneration for invigilation work should be suitably enhanced to commensurate with and in proper proportion to the overall emoluments of teachers per month. In

order that other categories of staff assisting at the examination centre do not have a grievance on this account, the rates of remuneration in their case may also be correspondingly revised upwards.

The teachers and others working at the examination centres have to be encouraged to face threats of coercion from students and others, boldly and firmly. Whereas on the one hand law and order authorities may take stern action against culprits, on receipt of complaints against them, and the university may take stringent action against the students involved, the university should provide financial cover to persons affected by violence and it should introduce comprehensive insurance scheme for the invigilators and others engaged in the conduct of examinations, for the entire examination period of the year. Under this scheme, the insurance premium is to be paid by the examining body, and in case of injury, or death, or permanent disability caused in the discharge of examination work, the injured/permanently disabled person, or the family of the deceased person, receive a substantial amount by way of compensation, from the insurance company concerned.

In addition, the university may create its own fund by deducting a small percentage of remuneration paid for the work of conduct of examination to individuals, to which they may add a matching grant of their own; the interest on the two combined being utilised to help teachers or others or their families, in distress, on this account, on individual merit basis (in addition to the relief provided by the insurance company, as suggested above). The Fund thus created could be managed by a committee consisting of the teachers' and Karamcharis' representatives and some university officials, to ensure its smooth and speedy operation and to avoid its misuse.

Once the work of conduct of examinations becomes suitably remunerative, and the insurance cover of the above nature and other reliefs as suggested above have been provided, the teachers and other staff performing examination duties should be made accountable. In order that participation of each teacher in the conduct of examinations and other examination work is ensured, the examination work (though remunerative) should be made a part of duty of the teachers and a provision to this effect be made, both in the form of agreement signed between the teacher and the management of the college, on the one hand, and between the college and the university, on the other, at the time of affiliation of the former to the latter. This condition should also be mentioned in the letter of appointment issued to a teacher.

In order to prevent communication of outsiders with the examinee students inside the examination centre, for the duration of the examination, the law and order authorities, who, on the request of the university, promulgate Section 144 of the IPC, prohibiting assembly of

more than four persons within 200 metres of the examination centre and prohibiting the use of loud speakers, etc. within the same distance, should also ensure that the measures taken are observed strictly and effectively. The present indifferent attitude (including connivance of police personnel) on the part of the police officials posted at the examination centres is to be regretted.

It has been sometimes suggested that instead of the local police, the police from other districts be posted, or in the alternative, the arrangements may be entrusted to other police organisations e.g. CRPF or the army. While deputing armed forces to help in the conduct of examinations may be out of question on several grounds, the possibility of posting personnel from other police organisations can be considered and discussed with the concerned authorities in the Home Ministry. A major fear that lurks in one's mind is that such an arrangement might give rise to inter-organisational problems of other types and may not be a workable solution in the long run.

It is, therefore, felt that the present arrangement of posting local police personnel at the examination centres may be continued. But a list of duties to be performed by such police persons should be worked out and laid down in writing, by joint consultation between the university and the police authorities. A list of such duties to be performed may be given to each such police personnel posted at the examination centre, in writing. Dereliction of any of the duties, on the part of the police personnel, may be taken serious notice of, under disciplinary procedures applicable to the local police force. In order to make the system work more effectively, senior police officers of the area of the rank of ACP and above, accompanied by senior officials of the university, not below the rank of a Reader, may take frequent rounds of the examination centres during examination hours, in the concerned area, to satisfy themselves that there is no crowding outside examination centres and the promulgation of section 144 of the IPC is being observed effectively. On the spot action against the defaulting police personnel posted at examination centres followed by such departmental action, as may be warranted, may go a long way in discouraging outsiders flocking at the examination centres as also create a sense of safety and security among the staff on examination duty at the examination centre.

It is well known that the limit of law once known to the law-breakers, has always encouraged them to break the law more frequently and without fear. The punishment for resorting to unfair means in connection with an examination should be made much more stringent than at present; the minimum being the cancellation of the whole examination. The punishment prescribed for each type of offence should be prominently printed on the Hall Tickets of candidates, as also prominently displayed

at the examination centre, and in each examination room. There should also be an announcement to this effect in each examination room by the invigilators on duty, at the start of the examination, each day.

In addition, the jurisdiction of the courts including High Court and Supreme Court, in dealing with appeals by the aggrieved students against punishment awarded to them may be barred. Instead, in each university a small committee presided over by a retired judge of the District Courts or High Court may be appointed, to deal with such appeals from students and the decision taken by such a committee on any appeal should be final.

In addition to the above administrative measures, a major academic reform that is suggested for consideration is the introduction of multiple question papers for the same examination. The question papers thus set are to be of the same standard, with the condition that no two examinees, sitting one behind the other, or one by the side of the other, getting the same question paper for answering. A major criticism against this reform has been that it is not possible to set more than one question paper from the same syllabus which could be of the same standard. Academic disparities are bound to creep in, thus adversely affecting the interests of one or more groups of students vis-a-vis other groups. Even if such minor disparities may occur, in the advanced academic world, it should not be difficult to find rational solutions to such problems and to provide adequate compensation for the same during evaluation process and/or during moderation of results.

However, multiple question papers with the same questions in all the papers, but differently arranged in one paper from the rest, will altogether eliminate the possibilities of occurrence of such disparities. In such an arrangement also, it is felt in certain quarters that the logic in which topics are set in the prescribed syllabus might be disturbed if the sequence of questions in the question paper is not in the same order. But such a fear is only imaginary. With the passage of time the students should get used to this arrangement irrespective of the order in which topics are mentioned in the syllabus.

In the present advanced stage of technology, in some countries, computer machines have been developed in which, in the case of multiple choice questions, the data pertaining to serial no. of answers to questions attempted by candidates sitting in a room, when matched with the seating arrangement of the room, brings out whether and which of the candidates seated in the room had resorted to the use of unfair means during examination. Developing of such or similar machines in our country which may undertake such an exercise even in respect of non-multiple choice questions, and their publicity may act as a major deterrent for students intending to use unfair means.

Evolving a New Academic Culture

L.C. Thana*

The 67th Annual General Meeting of the AIU held recently at Pondicherry has made certain observations presumably on the assumption that the ills now afflicting higher education in India, viz., relevance, quality and equity (*University News*, dated March 29, 1993) stem from the financial crunch and that if "adequate funds" (a relative term) are made available to universities, it would arrest further erosion in the standards of teaching, research and extension. In fact what worries those with social concern is that "the output has not been commensurate with the investment". A developing nation with limited resources cannot afford to fritter away its funds even on higher education, particularly in the absence of any social audit of higher education.

When asked about the most crippling features of higher education today, Dr. G. Ram Reddy said that "in his view, three factors are to be reckoned with. One, quality, second, accountability, and third, financing". He lamented the declining standards in the majority of institutions and that they actually worked far less than the prescribed 180 working days a year. The malaise, if it can be termed so, is to be traced to the absence of spine in university administration, which readily yields to the agitational tactics. If once the university insists and enforces the ninety day-work-for-semester-rule (as in the Agricultural Universities) the message will go home to in unmistakable terms. Vested interests attempting to thwart it must be shown their place.

Unconscionable delay in the publication of results has gained a notoriety and has rightly attracted criticism. It still remains a mystery how universities manage to prolong the publication of results to the detriment of students' interest, puncturing the image of the university in the process. The administration should take it into its head that the timely publication of the results is an index of the sound functioning of a university. The examination wing should be answerable to any lapse on this score.

But thereby hangs a problem. The Vice-Chancellors who have an eye on a second term will normally

try to keep the vested interests in good humour and as such they are not able to assert themselves adequately. They end up as handmaids to the powers that be. In such a context all meaningful intentions turn out to be just tall claims.

Even universities and colleges are started not to satisfy a felt need but to appease those who wield power.

Affiliation and follow-up actions are to be taken up seriously after very careful scrutiny of the observance of all established norms. This action should brook no dilution. In judging and determining academic matters, free hand should be given to academic and academics only without any political interference whatsoever. Patting the deserving and sacking the delinquents will have the desired effect. Merit-based promotion should take the place of time-bound promotion. Erring managements must be made to see sense and justice. Judicious and effective management of the limited finances available coupled with the generation of funds by the university itself by encouraging consultancy work will ease the financial strain to a great extent.

A Vice-Chancellor of the right type — bold, imaginative and incorruptible and with leadership qualities — can definitely give a healthy perception and direction to the university even under the present scenario. As the Vice-Chancellor, so the university.

The crux of the problem is however, neither finance nor politicisation but a lack of moral values, as correctly diagnosed by Dr. Ramjee Singh. He says, "it is the most among the Vice-Chancellors and administrators and more among teachers than students". When once emphasis is laid on moral values, the problems relating to quality and accountability will disappear in no time. And finance can never be a real constraint, if extravagance can be avoided and good interaction between universities and industry is established.

Education must be treated not as an industry but an investment in human development that underscores character and academic culture. The need of the hour is education that Swami Vivekananda envisaged where character comes first, culture second and curriculum the last.

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A Unique Girls College in Rural India

Autar S. Dhesi*

Majority of the Punjabis living in Britain and North America hail from the Doaba region mainly the areas — lying between Nawanshahar and Nakodar — of Kapurthala and Jalandhar districts, and Mahilpur area of Hoshiarpur district. In the fifties and early sixties they sent major part of their earnings back home to buy land, build houses and give financial support to relatives. They also contributed to the general development of their villages. With the joining of their families with them, there has been a significant change in their investment behaviour. The investment now tends to flow mainly to the urban centres.

However, they are still very keen to contribute to the social and educational uplift of the areas of their origin. Both altruism and enlightened self-interest influence their behaviour in this regard. As they prefer to get their sons and daughters married here, they have an indirect influence on the demand for educational courses by the future partners of their children. This is specifically reflected in the strong demand for modern disciplines such as electronics, computer science, computer applications, English language and pharmacy, etc. It is not unusual to find colleges in these areas offering such courses.

However, the girls College at Baba Sang Dhesian in Jalandhar district is emerging as a unique institutions in rural India. Besides having the support of emigrants from the area, it has the added advantage of being located to the historic gurudwara in the memory of 16th century Saint Baba Sang Dhesi. He was an ardent follower of Guru Arjun Dev ji. It is considered to be one of the holiest of holy places by the people in the area for thanks giving. No ceremony is deemed to be complete without paying obeisance at the historic place even by those who left the place for greener pastures abroad. His name is mentioned throughout Doaba with reverence by one and all.

Writing about saintly Sikhs, thus says Bhai Gurdas about Baba Sang Dhesi.

*Dhesi Jodh Husang Hai
Govind Gola Haas Milanda*

*Vaar 11, Pauri 23
(Ate San-Mukh Sikh)*

As he had laid great stress on 'gyan' a college was

established at this place in 1969. Today a postgraduate girls college stands on one side of the holy tank opposite the gurudwara where Baba ji used to pray and meet the congregation. The college gives the ambience of an Oxbridge College in the making.

A fleet of college buses can be seen plying in the morning and afternoon in the remote interiors of Doaba region to bring girls from their homes and take them back. Without such arrangements, many conservative parents would not dream of sending their daughters to college. There is also a small hostel attached to the college. About 50 per cent of the graduates of the college settle abroad. At present the college offers traditional subjects — economics, mathematics, political science upto M.A., home science, music, English (with honours) Punjabi (upto M.A.), Hindi and natural sciences (upto 10+2 level). From the next session, the college is to offer new courses — B.Sc. (Electronics), B.Sc. (Computer Science), B.Sc. (Economics) with Computer Applications, Diploma in Computer Applications, Diploma in Stenography (Punjabi and English) and Diploma in Textile Design, etc. The college expects to receive massive support for these courses as well as for further development of the campus from emigrants. Yet the main beneficiary will be the local community. It is all the more significant as about 50% of the students belong to the traditionally depressed segments of the society.

With the addition of these and some more such courses, the college will make a unique contribution to the educational development of rural girls in India. Those who are unable to go abroad will be absorbed in the modern sector with ease. The patrons of the college are already thinking in terms of developing this unique institution of higher learning in rural India into a 'University for Women' one day.

TO OUR READERS

Knowledgeable and perceptive as they are, our contributors must not necessarily be allowed to have the last word. It is for you, the readers, to join issues with them. Our columns are as much open to you as to our contributors. Your communications should, however, be brief and to the point.

*Professor of Economics, Guru Nanak Dev University, Amritsar.

The Education Budget

"Defence has the lion's share in the annual budget. Protecting the country from internal problems is as important as protecting it from external aggression... The only way to protect our country from internal problems is a meaningful and relevant educational system... Therefore, the money that we are spending should be treated as the amount spent for the internal defence of the country. Hence, at least half the amount that is being spent on the annual defence should be set apart for this purpose... As long as the Government does not know that education is as important as defence till then education continues to be mechanical work carried out with indifference without proper buildings, equipment, adequate members of the staff and a rational syllabus," thus observed noted educationist, Dr. H. Narasimhaiah, former Vice-Chancellor of the Bangalore University while delivering the Convocation Address at the 3rd annual convocation of Kuvempu University. Excerpts

Objectives of Education

The most important objective of education is to improve the quality of thinking in the students and to shape their attitudes in the right manner. We should not give much importance to mechanically passing on mere information and statistics. Most of this can be learnt by the student through his own effort. The teacher's help may be required to get clarification on certain aspects. But improving the method and the quality of thinking on healthy lines depends on constant, continuous and systematic effort. The art of training a student to think calmly, logically, without getting emotionally disturbed should be the prime aim and task of education. In order to achieve this there should be dialogue between the teacher and student in the class. "*Vade Vade Jayathe Tatwa Bodhaha*" i.e. dialogue results in knowledge and understanding. The monologue of a teacher ignores an important aspect of education. It dampens the interest of students in learning, and it also chills the creative instinct of the student and yields itself to routine teaching. Therefore, it is necessary to set apart some time in every class

for questions and answers.

The medium of instruction plays a prominent role in the understanding of the subject matter and also in student participation in classroom dialogue. It is the unanimous opinion of all educationists all over the world that the medium of instruction should be either the mother tongue or the regional language. There is not an iota of doubt in this matter. In spite of it English is flourishing as medium of instruction in our country and our state. There may be some necessity for adopting English as the medium of instruction in technical colleges and other institutions of higher learning. But the use of English medium at lower levels of education is an unpardonable crime.

In our state especially in big cities the craze for English medium has no limit. The disease which first took root among the upper class people has gradually seeped into the lower sections of society. We have been helplessly watching the pathetic spectacle of the Herculean efforts of even common men trying to admit their children to English me-

diun schools by paying heavy donations and exorbitant fees. The craze for English medium has spread to villages like an epidemic. Many teachers cannot teach effectively through medium of English. The teachers mechanically try to mouth in a parrot-like manner whatever they have learnt. Students cannot grasp the subject if it is taught like this. Under these circumstances dialogue and discussion between teachers and students is not possible. This is not only true at the high school and college levels but mostly true at the postgraduate level. We have become slaves to a foreign language and thus lost all our self-respect. Strangely the craze for English medium has been increasing continuously after we became independent. Before Independence, teaching in primary and middle schools was mostly through Kannada medium. Even in secondary education, Kannada medium had a special place. All those who were educated at that time and who are now occupying high positions had Kannada as their medium of instruction.

Our country has innumerable castes. A lot of harm is done by such castes. The newly-born English-medium caste has been doing great damage to the all-round progress of society. English is an international language and also the language of science and technology. It is to be learnt as an important language but should never be used as a medium of instruction. It is a matter of deep regret that even after 45 years of independence, debate has been going on as to which language should be the medium of instruction. As long as mother-tongue or regional language does not become the medium of instruction, education becomes soulless and meaningless. Besides, an English medium student becomes a foreigner in his own country.

Language plays a prominent role not merely in the field of education but also in the development of culture. It is not possible to promote our rich old culture through the medium of English. The love and preference of our youth for Western culture has been increasing. The signs of our enslavement to Western culture are clear. At the time of independence it is said that a high English official told an eminent Indian "Yes, you have got political independence today. But do not forget that we have left behind Western culture." This means though not politically, at least culturally, the British continue to be our masters. If the craze for English medium continues and also if the influence of Western culture goes on increasing in our culture, then the number of people studying Kannada and reading Kannada books will go on waning. For the section of the people which is considered to be intelligent, Kannada becomes a useless language and a language to be treated with indifference. Generally it is such an upper class which decides the direction for society to follow. Such a course may not be intentionally set by the upper class; but then the rest of the people will try to follow them mechanically. Already the number of people reading Kannada newspapers in cities like Bangalore is decreasing. For a considerable number of upper class people, English has become the language of conversation at home. In a number of families which have been influenced by English medium, birthdays start with cake and candle and end with the English Song 'Happy Birthday to you'. Many people have not understood the danger that is being caused by English medium and the attitude that develops with it. The foundation should be strengthened if Kannada is to grow and prosper. Only then Kannada can become the language of administration naturally and effortlessly. There need not be

any special effort as is now the case. Strengthening the foundation of Kannada for its all round growth implies making Kannada as the medium of instruction. Merely by establishing a Kannada University, Kannada will not grow. When there are no people to read Kannada books and valuable literature in Kannada there will not be much use for any research done in Kannada. Kannada will not get any fillip or strength by instituting awards in the name of well-known Kannada scholars, past or present.

It is a matter of deep regret that organisations which have been shouting slogans for Kannada, the proud sons of mother Bhuvaneshwari, do not refer to Kannada medium at all. If by chance such people are forced to speak in favour of Kannada medium, they do so in a disinterested feeble, half hearted, inaudible voice and ultimately become very lukewarm and cold. All the work that has been done for Kannada has amounted to watering the branches and leaves and not the roots.

Syllabus

Naturally the curriculum occupies the most important place in education. An important object of education is that it should help in understanding the economic and social problems logically and also in solving them by adopting scientific methods, which means that the subject of study should be relevant to the present conditions of our society.

Serious economic and social problems have been plaguing our country. We can somehow postpone our economic problems by begging the International Monetary Fund and World Bank. But we can never solve problems by taking such loans. On the other hand, there is a chance of

aggravating the problems by receiving loans. Besides, begging for loans lowers the self-respect of a nation. It is a matter of regret that we feel happy whenever we get loans as though it is an achievement. By taking loans we become dependent on others; by losing economic freedom we become slaves to foreign countries.

The only way to avoid such a situation is to become self-reliant. We have to give greater priority to Gandhian way of life and Gandhian Economic if the unemployment problem of our country is to be solved. According to Gandhian economics and principles what is to be done in our country is not mass-production but production by the masses. The Government should give special encouragement to village industries and protect them from competition from big industries. The Gandhian way of life is simple living and living with restraint and discipline. Gandhiji long ago cautioned that we have enough for our need but not for our greed. There is no limit to greed. Instead of simple living and a living of restraint what we are witnessing is ostentatious and luxurious life. From all points of view this tendency is dangerous.

Social Problems

Social problems are more complicated than economic problems. All these problems are related to caste, religion and other social evils.

In the whole world there is no other practice as pernicious as the caste system. We are the sole agents for the caste system. It is stupid and mean to ascribe good and bad qualities to a person for life merely on the basis of the accident of his birth. More than ninety percent of the people are denied social equality being victims of this inhuman and cruel system. On account of this,

society is divided into different strata educationally, economically and culturally. Annihilation of caste should be one of the prime duties of any educational system. The only effective method of destroying caste is by casteless marriages and not intercaste marriages. In intercaste marriages both the bride and bridegroom may have belief in caste. In spite of this intercaste marriages are one step in the direction of destroying the caste system. But in the case of casteless marriages both the bride and the bridegroom do not believe in caste.

Caste system is an integral part of Hindu religion. In our country the misuse of God and religion has been going on merrily and continuously for centuries. Middle men are a bane in all fields. They are exploiters. Religious middlemen are the most dangerous. In this connection, I wish to narrate an incident. One day a religious preacher went to a village. After entering the village, he remembered that he had forgotten to post a card which he had brought with him. He enquired a youth whom he met on the road about the way to the local post office. The youth gave proper directions to go to the post office. The preacher thanked him and asked him to attend his lecture in the village the same evening. The youth wanted to know the subject of his discourse. The preacher replied that the subject was "The Way to Heaven". The youth had a hearty laugh and louted the preacher by retorting how a person can show the way to heaven when he himself does not know the way to the village post office. Anybody can bluff about heaven and the way to heaven as nobody has returned from heaven. But the correctness of the way to the post office can be verified. Most of our religious preachers are cheats who boast of showing the way to heaven without knowing the way to the post office. These people

are cheating the innocent and gullible people in the name of God and religion. Communalism, fundamentalism and obscurantism are growing in the name of religion. "Our God is superior to your God and our religious book is the only gold-mine of truth" has been the refrain of religious bigots.

Our country is secular. Many interpretations and even mis-interpretations are being given to this very important term. The correct meaning of secularism is that religion is individual, personal. Everybody has full freedom to keep his religious beliefs. On this basis when we are at home we may cherish different religious beliefs. That is, one may be a Hindu, another a Muslim and yet another a Christian and so on. But once we come out of our houses we should all behave as Indians. All Indians should have the same common civil code. Most of the problems we are facing are due to organised religions. We should never mix religion with politics. There will be a terrible explosion when they are mixed. What we are witnessing is such a havoc and catastrophe. We are experiencing the most serious consequences of such a mixing up of religion with politics.

When religion is only a personal matter then there should not be any relationship between religion and Government. The Government should neither encourage nor discourage any religion but be neutral in religious matters. Therefore, it should not declare religious holidays.

Government should declare only three public holidays -- the Independence Day on 15th August, the Rajyotsava Day on 1st November and the Republic Day on 26th January. And then the Government should allot eight or ten holidays to

the educational and Government institutions and leave them to be used at their discretion. The visits of high dignitaries of the country and the state to religious places, to religious people and godmen should be purely personal. There should not be any link between their high positions and their religious actions. The expenses that are incurred for their travel and other items regarding such religious actions by the dignitaries should be borne by them personally. Besides, for such private visits and religious practices the television and other mass media should not given any kind of publicity. Not only should the mass media be aloof from any religious activity, the Government should not allow the use of public address system for the announcement of any religious activity.

It is customary to call our country 'Dharma Bhoomi' and 'Punya Bhoomi'. There is no 'Dharma' where there is caste; there is no 'Dharma' either where prominence is given to wealth. Dharma or religion has become commercial. Centuries ago Vidura told Dhrutharastra that people aspire only for the fruits of Dharma and nobody is interested in following the Dharmic principles. If this were true during those days, it is literally true today. Our country may be a Dharma Bhoomi or a Punya Bhoomi for the economically and socially forward people and other vested interests. But this country is an intolerable hell for vast sections of the poor, the oppressed and for the people living in slums and for those who have been suffering on account of social evils.

Our country and society are saturated with innumerable superstitions and meaningless rituals. Their root cause is fear and ignorance. Basavanna said that kindness is the basis of all Dharma. This is true. But there is a lot more truth in the state-

ment. Superstitions damage self confidence. Swami Vivekananda declared that he who has no faith in himself, who has no self-confidence, is an atheist. According to this definition it is no surprise if more than ninety percent of our people are atheists.

It is a matter of regret that there exist so many unscientific and irrational practices even in this age of science. There is considerable science in our country; but there is no scientific temper. There is a lot of pompous religious practice but there is no power of discrimination. The sun and the moon have not yet escaped from the clutches of 'Rahu' and 'Ketu' even though man has set foot on the moon and successfully returned from it. Even though there are no 'Rahu' and 'Ketu' planets in the solar system, Rahukala continues to be the living faith of a large number of people. Primitive man hid himself in caves due to fear at the time of eclipses. The so called modern educated men and scientists hide themselves in their houses on such occasions. There is not much difference between the attitude of the primitive man and the modern man. The present pattern of education is converting an uneducated superstitious person into an educated superstitious person and an uneducated communal minded person into an educated communal minded person. Educated superstitious persons and educated communal minded persons are more dangerous to society than their uneducated counterparts.

Science instead of becoming a way of life has mostly become a means of livelihood. Still we have many more social evils. It may be proper to dwell on one more social evil. Ours is a male dominated society. In every field priority is given to males. Such ideas as women should be subordinate to men took their

birth centuries ago. Many of them are still in vogue. Cruel and obnoxious practices such as dowry are still holding sway. We are witnessing the pathetic sight of numerous dowry victims going up in flames. There is a chance of the elimination of the practice of dowry by casteless or intercaste marriages. Of late another heartrending devilish and inhuman practice is coming into existence. Due to this practice the female foetus is murdered in the mother's womb itself. The female child is becoming unwanted. That means we do not want mothers. This modern man potentially is a *Rakshasa* — a demon.

In the present system of education, there is not a single word about the existing social problems such as the caste system, neither is there any reference to superstitions. There is not a single lesson regarding scientific temper. It is on account of this that age-old blind beliefs and meaningless practices patronised by vested interests are flourishing without any impediments. But the few good changes that have come about are not due to any conscious effort. Most of them are inevitable changes.

There is a strong military defence in every country for its protection from external aggression. We have been spending crores of rupees in our country also for such a military defence. Defence has the lion's share in the annual budget. Protecting the country from internal problems is as important as protecting it from external aggression. We have already dwelt at length on the serious problems which have been pestering our society. Danger signals of these internal problems causing damage to the unity and integrity of the country are clearly evident. The only way to protect our country from internal problems is a mean-

ingful and relevant educational system. The strength of our educational system is the strength of our country. Society will be healthy and strong if the educational system is meaningful and effective. Therefore, the money that we are spending on education should be treated as the amount spent for the internal defence of our country. Hence, at least half the amount that is being spent on the annual defence should be set apart for this purpose. It is a matter of deep regret that the Government does not know the importance of education. As long as the Government does not know that education is as important as defence till then education continues to be mechanical work carried out with indifference without proper buildings, equipment, adequate members of the staff and a rational syllabus.

Teachers are the architects of the educational system. Even the best educational system can be damaged by incompetent teachers. Similarly the shortcomings which may exist here and there in our educational system may be more than compensated for by competent teachers with commitment. Teachers should not consider their work as a profession; it should be considered as a mission, an opportunity to serve society with devotion. Teachers should consider the students as their children and teach them and correct them with affection. Teaching will be effective only when the gap between the students and the teachers narrows down. It is impossible to expect purity in other fields when religion and education which should guide the nation and society themselves become polluted. When tank water becomes polluted, naturally tap water also becomes polluted. Therefore, there should be a revolution in the thinking process in the fields of religion and education. Only then there can be a social revolution.

Teacher Development Programme

A teacher development programme was recently organised by the Academic Staff College of Himachal Pradesh University. Inaugurating the 4-week 15th Orientation Programme, Prof K.C. Malhotra, Vice-Chancellor, Himachal Pradesh University, apprised the teacher participants that the society expected more from them as they were considered the guiding poles and main instruments in developing people's capabilities. 'The responsibility of teacher further increases as he emerges out to be a role-model and if he is himself half-baked, the society can not rely on him to shoulder this responsibility', he said. Tracing out the importance of teaching at higher level of education, Prof. Malhotra pointed out that various sub-systems of society were suffering from many evils like corruption, nepotism, bribery, lack of trust, self-centredness etc. and effective corrective measures could be initiated only by the educators. The opportunity of sharing a platform where educators could sit together, ponder over, deliberate and equip themselves with the desired skills and values was described by Prof. Malhotra as unique. He exhorted the participants to identify their weaknesses and strengths and to take steps for personality development.

The course contents were drawn from the guidelines of UGC and derived from the needs and expectations of the participants. For identifying the learning styles of the participants, a special workshop was conducted. This workshop assisted the course team to design strategies for the development of appropriate teaching conceptions and environment for self-development. The

needs for training were identified through different exercises such as Breaking the Ice, Brain Storming, Discussion, Pre-Orientation Awareness Test, etc. Main emphasis during the programme was laid on learning by doing and participation. The participants were exposed to emerging teaching environments and new teaching techniques.

In the first week of the programme the teaching style of each participant was evaluated with the help of videoisation of their teaching. During the Orientation Programme, a number of techniques facilitating the enhancement of teaching conceptions in each teacher were utilised. Some of these were Communication Game, Group Problem Solving, Group Dynamics, Hidden Talent, Buzz Session, Brain Storming, Multi-Quiz, Brains Trust, Think Tank, Video Presentation, Workshop, etc. Each participants completed a project work/assignment work in his own area of study which was evaluated by the experts.

Monitoring and evaluation was an integral part of the programme. The group performance was closely examined and evaluated by the course team on daily and weekly basis. Pre-Orientation Awareness Test was conducted for assessing the level of understanding of participants with respect to teaching dispositions. At the end of the programme multi-quiz test and Objective-type Written Test were held with the purpose of evaluating the performance of participants and also revising the knowledge already imparted to them.

20 teachers belonging to Hima-

chal Pradesh, Haryana and Uttar Pradesh participated in the programme. Prof. B.C. Verma of the Department of Chemistry was the Co-ordinator of the Programme which was conducted under the guidance of Dr. Yeginder Verma, Director, Academic staff College.

Delhi University Convocation

Mr. Justice Ismail Mahomed, judge of the Supreme Court of South Africa and President of the Court of Appeal of Lesotho, was conferred the Honorary Degree of Doctor of Laws (LL.D.) by the Vice-President, Mr. K.R. Narayanan, at the 70th annual convocation of Delhi University held recently.

The distinguished jurist, who is also the Chief Justice of Namibia, said the occasion was "special" to him for three reasons. Firstly, his ancestors came from India; secondly, Mahatama Gandhi spent many years of his life in South Africa and influenced him greatly and lastly, India had throughout remained committed against the policy of apartheid.

In his convocation address, Mr. Justice Ismail said those passing out of Delhi University should consider themselves fortunate as such a privilege was denied to millions in Asia, Africa, Eastern Europe, Latin America and even large areas of the developed world for a variety of reasons.

"The unknown potential of so many of our children, bestowed with the same gift of life and the same claim to the legitimate pursuit of happiness, is prematurely and tragically snuffed out by unremitting poverty, chronic disease, malnutrition, natural disasters and episodes of

brutal/communal violence generated by religious bigotry," he added.

Stating that the national ethos in recent times had been invaded by an "insidious virus", Mr. Justice Ismail said the "obscene intolerance and brutality in the disgraceful attack on the Babri Masjid and the pitiless persecution of Muslims and their property and their dignity in Bombay and other cities following the demolition had brought deep shame and disgrace to our national ethos and our commitment to a visible and abiding secularism."

"Those who seek to wound our Muslim brothers and sisters seek not only to wound an important and indigenous minority native to the soil of India, but they seek to wound the very soul of India itself. It is in a very fundamental sense an act of treachery against India itself and a challenge more subversive to its legitimacy than even any foreign invasion of its territory", he said, adding that the nation can limp in its response to such a challenge only at the peril of its own claim to survival.

The university, Mr. Justice Ismail said, had sought to prepare the students for this kind of a challenge. But the university also strives to "internalise within you an intellectual and emotional temper, crucial to the proper defence and sustenance of an enduring civilisation".

At the Convocation degrees were awarded to candidates of Ph.D., D.M. (Cardiology), (Neurology) and (Gastroenterology), M.Ch. (Plastic-Surgery), (Cardio-Thoracic-Surgery) and (Neuro-Surgery). Also, 156 meritorious candidates were awarded medals and prizes.

IGNOU Plans Reorientation

The Indira Gandhi National Open University (IGNOU) plans to reorient its activities in a bid to provide greater structural flexibility for

programmes and more operational freedom in various courses.

According to Vice-Chancellor Prof. V.C. Kulandai Swamy, the impact of the reorientation will extend to all major areas of operations of the university. In pursuance of the provisions in the IGNOU Act and Statutes, the university shall strengthen and diversify the degree, diploma and certificate programmes in relation to the needs of employment and economic development of the country, he added.

The Vice-Chancellor said the major emphasis in the Eighth Plan would be on the development and preparation of a large number of courses in various functional areas. According to him, these courses would consist of learning packages developed around the knowledge and skills required for the performance of various functions in the industry, trade, agriculture and social services. These courses would also be relevant to self-employment and the unorganised sector, the VC stated.

Identification of courses in such a large number of areas would require continuous interaction and consultation with various employing agencies, especially large employers, to ascertain the changing nature of job content, areas in which there was shortage of trained manpower, the requirement for upgradation of the skills and competence of serving personnel, he added.

Globalisation of Indian Economy

A National Seminar on Globalisation of Indian Economy and Business Environment was recently organised jointly by the Department of Economics, Bihar University, and M.P. Sinha Science College Silver Jubilee Celebration Committee. Inaugurating the Seminar, Mr. Romesh Chandra, President, World

Peace Council said that the main objective of the freedom struggle was to build a new India in which every citizen of the country could get justice and equality. He emphasised the need for self-reliance and less dependence on money coming from outside.

Speaking on the occasion Mr. Haribansh, Editor of Prabhat Khabar and Former Additional Press Advisor to the Prime Minister said that nearly 40 thousands to one crore employed persons were to be retrenched from their respective jobs if market-oriented economy based on the foreign countries was adopted by the Government. Mr. Kumar Anand from Jansatta alleged that the Central Government never intended to have a close view of the economy as a result of which the share of the Indian economy in the world market was less than 1/2 percent.

Dr. P.N. Singh, Professor and Head, Department of Economics, Bihar University, and Seminar Director introduced the theme in his keynote address to the participants. According to him, globalisation simply means achieving world standard in terms of quality, cost and price without which we are not going to survive. India is now serious to liberalise and globalise its economy. The changes have been introduced. They have started giving results. The economy is stabilised. The problems that invite our immediate attention are of clearly defining the change agenda, a clear cut strategy, political will to change and skill to manage those changes. He emphasised that globalisation was a compulsion and there was no question of going back to the old regulated track.

Over 100 delegates participated in the seminar at which fifteen research papers were presented. Dr. B.R. Singh, Vice-Chancellor of the University was the chief guest at the seminar.

Self-sustaining Model for a Village Library

As part of its initiative to support and strengthen the country in the area of post literacy, the Literacy Cell of the Rajiv Gandhi Foundation, in collaboration with the Machwe Foundation, has set up a self-sustaining and replicable model for a village library in Beeti village near Ajmer. The project includes developing a simple operating manual and a set of simple extension activities that could be linked with the library. Beeti was selected as it is a backward village with little literacy.

The rural library set up in Beeti has been equipped with more than 400 books. The library is housed in a building provided by the District Administration and the land was donated free by the villagers for construction of the library.

A village representative is posted at Beeti on behalf of the two sponsoring organisations. Apart from the books, three newspapers are reaching the library daily. Around 60 families most of which comprised members who were illiterate, have joined the library-oriented literacy scheme.

After the first visit to Ajmer and initial discussion with the local people, it was decided to develop a publishing programme of books written by local persons. Workshops have been conducted to identify and encourage local talent. Around 25 manuscripts have been received from the villagers themselves including stories on issues of common interest and folklore.

The objective of the programme, was to develop a whole body of literature authored by villagers themselves so that the age-old dependence on urban literature is reduced and people can benefit from the age-old wisdom of the country.

Readership surveys carried out in the village indicate an initial preference for scriptures and works of fiction. Periodic surveys will be carried out to ascertain changing patterns of readership so that the libraries anticipate and satisfy the interest of its members.

The experiment has generated an enthusiasm in the village. The library, it is hoped, will ensure sustenance of literacy and transfer of knowledge and skills. The Machwe Foundation and the Literacy Cell of the R.G. Foundation would like to replicate the model on a larger scale.

Machwe Foundation has been instituted in memory of Prabhakar Machwe and has sponsored many such innovative ventures in the past. The library at Beeti will be followed by another such venture in Ucilankathuvallesi village in Ramanathapuram district in Tamil Nadu.

Correspondence Course in Computer Applications

The Bharathiar University, Coimbatore, is offering postgraduate degrees in computer application and business administration through the correspondence education programme from this academic year, the first university in the country to do so.

According to Dr K.M. Marimuthu, Vice-Chancellor, students seeking enrolment for the two courses would have to take an entrance test. Candidates who did not have mathematics as a subject at the graduation level, but opted for the MCA course, would be required to undergo another screening test, he said.

Dr. Marimuthu said the university would have the first overseas centre for its correspondence education programme in Kuwait from August/September. The Kuwait centre, being started with the cooperation of the Kuwait Government,

would offer courses to the Indian expatriates and Arab nationals in the West Asian countries.

The Bharathiar University would soon have study facilities for the Ph.D. programme in animal physiology under the environmental studies to be sponsored by the defence department.

Training Programme on Manpower Planning

The Institute of Applied Manpower Research proposes to organise a training programme on Manpower Planning for Education Sector from July 7-16, 1993 at New Delhi.

The objective of the training programme is to deal with manpower planning in the education sector with the specific aim of development and utilisation of critical skilled categories of human resources. It also involves estimating the existing and future manpower supply and demand at different levels of education and skills with a view to meet the requirements for trained manpower. For planning purposes, it is equally imperative to have an upto date information system on education.

The course contents include : Linkages between manpower planning, educational planning and economic planning; Educational system: an overview; Manpower implications of education policies and planning; Data base for educational planning; Manpower approach to educational planning; HRD approach to educational planning; Rate of return approach to educational planning; Active education : concepts and issues; Forecasting manpower demand and supply for education sector; Education-employment linkages; Delinking of degrees from jobs; Computer applications in Manpower Planning for the education sector; Vocationalisation of education : structure and issues; and Role of distance learning in HRD.

Further details may be had from Dr. J.P. Saxena, Head (Training), Institute of Applied Manpower Research, Indraprastha Estate, (Opp. Indira Gandhi Indoor Stadium), Mahatma Gandhi Marg (Ring Road), New Delhi - 110 002.

6.4 cr Research Budget for Osmania

Osmania University has earmarked a sum of Rs 6.4 crore for research in science and humanities, technical courses and faculty improvement programmes in the development budget of the university for the platinum jubilee year of 1993-94.

The Vice-Chancellor of the university, Prof. M. Malla Reddy said in Hyderabad recently that research would get priority benefiting both the students and teachers. An amount of over Rs 3 crore has been earmarked for major research projects and fellowships. Thirty-three major research projects sanctioned by the University Grants Commission (UGC) and 54 research projects by other funding agencies involving Rs 2.5 crore were at different stages of progress.

The Department of Electronics (DOE) and the World Bank have identified the University College of Engineering as one among the 14 engineering colleges in the country to implement a pilot project "Electronics Industry Development, Manpower component" for which Rs. 58.78 lakh was sanctioned.

Osmania University ranks third in the Junior Research Fellowship (JRF) successes at national-level with 250 scholars qualified under the National Education Test (NET) being sanctioned Rs 76 lakh.

Reviewing the academic progress of the university, Prof. Malla Reddy said Rs 60 lakh had been sanctioned to the Departments of Physics, Geophysics, Chemistry, Economics and Political Science for the purpose

of undertaking research programmes. The MBA programme of the university would also be benefited with a grant of Rs 15 lakh for purchasing new equipment. The University Observatory at Japa-Rangapur which has South East Asia's largest 48" reflecting telescope would be upgraded and modernised with computers and automation for accuracy and for this the UGC has agreed to provide Rs 60 lakh.

National Library of Educational and Psychological Tests

The National Council of Educational Research and Training (NCERT) has set up a National Library of Educational and Psychological Tests (NLE&PT). It is an apex information centre for Indian and foreign made tests in Education, Psychology, and allied fields. The main objective of this library is to cater to reference needs of academicians. It is open to persons from all over the country. The tests are available to users for consultation in the library only.

Collection of specimen sets of tests is a continuous activity of this library. Authors, publishers, and distributors of tests are invited to send in complete sets of their test materials to this library. It shall appreciate their efforts to serve and further the cause of good quality test development in the country. Their contribution will enhance use of the knowledge of psychometrics in the specific background of our socio-cultural milieu.

Contributions of such test materials may ensure that comprehensive information regarding the coverage of psychological and educational factors and contents, the target groups, standardization details of validity, reliability, norms, and methods used, etc. is made available.

Further details in connection

with the library and/or tests may be obtained from the Incharge, National Library of Educational and Psychological Tests, Department of Educational Psychology, Counselling and Guidance, NCERT, Sri Aurobindo Marg, New Delhi - 110 016.

Agreement on Academic Exchanges

The Karnatak University has signed an agreement with three Iranian universities — Tarbiat Nidaress, Teheran and Isfahan — for academic exchanges. Joint research studies and consultancies in physics, chemistry, botany, zoology, geology and marine technology have been identified as areas of interest for mutual exchanges.

The agreement was signed by the Karnatak University Vice-Chancellor, Mr. S. Rame Gowda, and Dr. G. Reza Taleghani, Head, Education Section, Government of Iran, and Dr. M. Asyed Esfahani, Chancellor, Tarbiat Modaress University at Teheran recently.

Professor Emeritus Awards

The Governor of Assam, Sri Loknath Mishra, conferred the Professor Emeritus Award to six distinguished retired professors of the Gauhati University at a function held in Guwahati recently.

The distinction which is conferred by a university to a professor in recognition of his distinguished services rendered during his life time for advancement of education and promotion of research, was awarded this year to Professors : Dr. Prafulladatta Goswami of Folklore Research; Dr. Jamini Mohan Chaudhary, former Vice Chancellor of the GU; Madhab Chandra Goswami of Anthropology; Dr. Hari Prasanna Das, former rector of the GU; Bhupendra Chandra Kar of the education; and Dr. Amresh Dutta of English.

The governor, who is also the Chancellor of the GU, presiding over the function, said that institution of such awards creates enthusiasm among the new generation of teachers for greater devotion to their work.

In his address, the Vice-Chancellor of the GU, Dr. N K Choudhury expressed his gratitude to the retired teachers for their contributions to the GU. Because of their efforts and the good work being done by the present generation of teachers, the University could claim to have achieved remarkable success in teaching and research, he said.

The Professor Eminentus Award-ee is entitled to avail of all facilities of library use and research work in the GU as provided under the rules. This Award was given away last time in 1989, to five retired professors.

'Plantation' — A Compulsory Subject

The Ranchi University proposes to introduce "Plantation" as a compulsory subject in the degree course. A decision to this effect is reported to have been taken at the Academic Council meeting held recently. The course will make it compulsory for all students in the degree course to plant at least three different categories of trees during the study. One should be fruit-bearing, the second must belong to such species to be useful for making furniture and other house-hold fittings equipment, and the last should be of firewood variety.

UGC Grants for Alumni Associations

The University Grants Commission will provide a grant of Rs. 50,000 to the universities to form alumni associations, Prof. G. Ram

Reddy, Chairman of the UGC said in Hyderabad while addressing a gathering of eminent former students of Osmania University. The meeting resolved to constitute OU Alumni Association to work in furtherance of the cause of the development of the university.

Prof. Ram Reddy said while many universities all over the world maintained contact with their former students through Alumni Associations, the Indian universities do not keep in touch with their former students.

Speaking on the occasion, Prof. Malla Reddy, Vice-Chancellor, Osmania University, said that an Endowment Fund of Rs. 2 crore was proposed to be raised with the help of alumni to award scholarships to meritorious students besides undertaking research projects. He sought the cooperation of the alumni in the development of the university.

Two More Engineering Colleges for Punjab

The Punjab Government has decided to set up two new engineering colleges in Firozpur and Gurdaspur districts. According to Mr. Lakhmir Singh Randhawa, the State Technical Education Minister, the Educational Consultants India Limited, a leading consultancy organization of the Union Ministry of Human Resource Development, had been asked to prepare a detailed project report on the structure of these colleges.

The proposed colleges would meet the demand of technical manpower required for 20% growth in the industrial sector during the 8th Five Year Plan.

At present, there are four engineering colleges in Punjab.

Expert Panel for Educational Projects

Educational Consultants Consortium (EEC), an autonomous body, maintains a panel of eminent Consultants having wide range of experience in handling educational projects. It has already a wide base of Institutional Membership of over 310 Voluntary Organisations all over India.

EEC has taken upon themselves a new role of "Secondment of Experts and Teaching Personnel" and proposes to offer services to Individual Membership drawn largely from the academic community. Under this activity, the services that could be offered to this category of membership may include the following :

- * using expertise of the Members in their respective areas of competence for the execution of Projects awarded to EEC;
- * recommending the names of Members to other organisations that may wish to borrow the services of experts with specific experience/knowledge empaneled on the ECC Roster;
- * broadening the scope of the existing In-house ECC Quarterly Newsletter to include articles and features of interest to academic community; inviting Members for contributions for publication in the Newsletter and thus to make the "Quarterly" a lively forum of discussions on topics of interest to academicians and intellectuals;
- * obtaining the lists of vacancies from UNESCO, UNDP and other International organisations and circulating the same by post amongst Members from time to time or through the EEC Newsletter;
- * promoting any other exchanges of



consultants including Secondment of experts and teaching-personnel for assignments abroad; and

- * making available ECC publications at the same concessional rates as is being offered to institutional Members.

Further details can be obtained from the Administrative Officer, Educational Consultants Consortium, K-49, Model Town, Delhi-110009.

Computer Applications in Library & Information Services

The National Institute of Small Industry Extension Training, Hyderabad proposes to organise a programme on Computer Applications in Library and Information Services from 9 - 20 August, 1993.

The objectives of the programme are : (i) to provide an understanding of the principles of computer operations; and (ii) to use software packages on micro-computers.

The course contents include (1) Fundamentals of computers — Introduction to computers, Peripheral Devices, Programming Languages; (2) Operating systems — Salient features of MSDOS, Application of MSDOS; (3) Application Software — Wordstar, dBASE III plus, CDS/ISIS; and (4) Library Applications — Acquisition, Serials control, Cataloguing, Bulletin preparation, and SDI service.

Further details may be had from The Registrar, NISIET, Yousufguda, Hyderabad 500 045.

Orientation Course for New Lecturers

A ten day Orientation Course for newly recruited lecturers was conducted by the Andhra Pradesh State Council of Higher Education at Lal Bahadur College, Warangal. The

course was inaugurated by Dr. K. Jayashankar, Vice-Chancellor, Kakatiya University while Prof. A. Balakrishna Reddy, Vice-Chairman, A.P. State Council of Higher Education presided over the inaugural session. Dr. M.N. Ramesh Kumar, was the course director. About thirty lecturers participated in the Orientation Course.

The topics covered in the Orientation were: Higher Education prospects-Retrospect; Education Commission Reports; Education Philosophy, Aims & Objectives; Curriculum design; Class Room Techniques & Presentation; Teaching Methodology; Concept Philosophy of Education; Evaluation Strategies — Teachers—Students; Education Technology; Time Management; Institutional Planning; Communication skills; Art of teaching; Professional Ethics and Work cultures; Classroom discipline - Motivation; Role & Social responsibility of Teacher; Situational Teaching; Evaluation Methodology; Student group behaviour; Teaching aids; Role of Teacher in extension services NCC, NSS etc.; What makes a good teacher; Questioning strategies; Respective teaching; Micro teaching; Creativity in students; Students counselling; and Lesson Plans, Annual Plans and maintenance of teaching diaries.

The resource persons were drawn from Kakatiya University, Warangal, Osmania University, Hyderabad and Dr. B.R. Ambedkar Open University. Senior resource persons from educational administration, academic fields were also involved. The responses of the participants were very encouraging.

The valedictory session was addressed by Dr. M. Venkat Rao, Chairman, A.P. College Service Commission and presided over by Prof. Dinkar Sirdeshmukh, Dean, College Development Council, Kakatiya University, Warangal.

John Dalvi Award

Dr. Hemlata Talesara, Reader, Faculty of Education of Psychology, M. S. University of Baroda, has been conferred the John Dalvi Award by the Leslie Sawhny Programme of Training for Democracy in recognition of her dedication and the excellent work she has been doing for the cause of youth and tribal people. She participated in a teacher's camp organised by the Leslie Sawhny Programme in 1971. After receiving training she dedicated herself to training of youth and tribal welfare. She helped LSP organise over a dozen camps for students, teachers, community workers and tribal in Rajasthan and in Gujarat.

News from UGC

Countrywide Classroom Programme

Between 2nd July to 8th July, 1993 the following schedule of telecast on higher education through INSAT-ID under the auspices of the University Grants Commission will be observed. The programme is presented in two sets of one hour duration each every day from 1.00 p.m. to 2.00 p.m. and 4.00 p.m. to 5.00 p.m. The programme is available on the TV Network throughout the country.

1st Transmission

1.00 p.m. to 2.00 p.m.

2.7.93

"Environmental Education: In and Across the Borders - V"

"Starfinder - IX. Gravity and Weight"

"Transport"

3.7.93

"The Art of Papier Mache"
"Heritage — Staying Alive-II"
"Week Ahead"

4.7.93

No Telecast

5.7.93

"Bacterial Fertilizers"
"Commerce and Management Education"
"Yours Sincerely"

6.7.93

"Environmental Friendly Detergent"
"Improve your Smile with Cosmetic Dentistry"
"Law Education - Moot Courts"

7.7.93

"Evolution of Manufacturing"
"The Indian Rose"
"Desert Bats"

8.7.93

"Graphics with Microcomputers - V."
"Concepts of Animation"
"The Good Doctor - I"
"Teaching and Learning English"

Ind Transmission

4.00 p.m. to 5.00 p.m.

2.7.93

"Aesthetics of Film Adaptations-II"
"Colours"
"The Week Ahead"

3.7.93

No Telecast

4.7.93

No Telecast

5.7.93

"Bacterial Fertilizers"

"Commerce and Management Education"

"Yours Sincerely"

6.7.93

No Telecast

7.7.93

"The Dinosaur - I"

"The Equipment Bridges and Rafts"

"Preserving the Past"

8.7.93

"In Search of Ethnic Dimensions: The Koyas - I"

"By the People - V"

ASSOCIATION OF INDIAN UNIVERSITIES

AIU House, 16 Kotla Marg, New Delhi 110002

Applications on prescribed form available from this Office on payment of Rs. 2/- (Rupees 5/- if required to be sent by post) are invited from Indian Citizens for the following posts:

	Scale of Pay
1. Director (Research)	Rs. 4500-150-5700
2. Deputy Secretary	Rs. 3700-125-4700-150-5000

Qualifications & Experience

Post 1 : Director (Research)

Essential : 1. A Ph.D. degree or equivalent published record;
2. A good academic record with first or high second class at the Master's degree;
3. Experience of research in higher education, preferably in examination reforms/question banking.
Desirable : M.A. or Ph.D. in Education

Post 2 : Deputy Secretary

Essential : 1. First or high second class postgraduate degree in Commerce or Economic or Business Management;
2. Atleast five years experience in an administrative post in a University/Govt. Department/Autonomous Organisation.
Desirable : 1. Experience of supervising a Finance and Accounts Department with capability of independently handling funds and undertaking financial planning;
2. Knowledge of administrative rules and understanding of issues in University system.

The posts carry dearness and other allowances generally at the Central Government rates. Relaxation in any of the requirements may be made in deserving cases. The Association reserves the right not to fill up the vacancies advertised, if the circumstances so warrant. SC/ST/Ex-servicemen will be given preference. Canvassing in any form by or on behalf of a candidate will be a disqualification. Persons already in service should apply through proper channel.

Applications complete in all respects should reach the office by 7.7.1993. Applications received after the last date or without complete information may not be entertained.

Optics for Advanced Students

E.S. Raja Gopal*

Ajoy Ghatak. "Optics", 2nd Edition. New Delhi, Tata McGraw-Hill, 1992. Pp. xviii + 694. Rs. 90/- (Paperback).

The publication of a second edition is the acid test of the goodness of a book and the demand by the readers. Prof. Ghatak of IIT, New Delhi, who combines a flair for teaching with a gift for research, is to be congratulated for bringing out a revised edition of the textbook originally published in 1977. The usual details of information about the subject are embedded in pithy comments about historical developments, a set of worked examples, a number of problems and some suggestions for further reading in each topic. The writing is clear and free flowing. It is therefore not surprising that the book has sold well.

The book has a total of 25 chapters divided into different groups. The first chapter is an introductory one containing some remarks on the history of the corpuscular theory, wave theory, quantum phenomena and laser system developments. Part one covers geometrical optics in four chapters. It is conventional to start from the observational evidence for Snell's laws of reflection and refraction. The author on the other hand starts with Fermat's principle of least time, actually extremum in time, as the basis for developing geometrical optics. While this approach has the elegance of general, variational principles, understandable in a second or refresher course

or by some advanced students (undergraduate classes at IIT ?), it does have some disadvantages for a new student of optics. The Fermat's principle itself has to be introduced as an axiom without any evidence. Further, the idea of a refractive index has also to be introduced axiomatically. The sequence of topics is also unsuitable for an undergraduate course. Immediately after discussing the laws of refraction, the author jumps to anisotropic media and the case of uniaxial crystalline medium and the behaviour of the extraordinary ray in such media. This would be a very difficult sequence of topics in normal university courses. The phenomenon of double refraction is introduced in section 19.5 and uniaxial crystals are best considered after this. Similarly the postponement of total internal reflection to section 10.4 has resulted in a contrived way of explaining the formation of mirages (section 2.4), whereas the more conventional approach handles these phenomena quite naturally. One is reminded of the celebrated book by the famous mathematician Felix Klein, published towards the end of last century, "*Introductory lectures on the basic principles of geometry*", which set the trend for mathematical research all over the world for the next half a century on problems of Cartesian geometry of higher dimensions, non Euclidian geometry, projective geometry, affine geometry, geometric topology and so on. The novice will have difficulty in understanding

even the first page! In recent times in our own country, the physics textbook published a few years ago by NCERT for the 12th standard students discussed electrostatics — the beginning topic in electricity and magnetism from the point of view of line integrals of action. Such approaches are good for advanced students to demonstrate the conceptual unity and simplicity of Physics when discussed from a vantage viewpoint.

The remaining four chapters for Part 1 deal with lens systems, their design principles and their aberrations. They are done carefully. In a book of this type one expects a mention of the reflecting optics, telescopes and Schmid corrector plate. Also while the Huygens eye piece is discussed, other types are not mentioned. I believe the distortions of Fig. 5.22 are called barrel distortion and pin-cushion distortion.

Part 2 of the book consists of five chapters. Vibrations and Waves form the connecting theme, which is done in a conventional manner. The author could have used the discussion of the transverse vibrations of strings to introduce the ideas of polarisation of various types, if one were aiming at undergraduate students. In discussing the wave propagation in a gas, the famous contributions of Newton and Laplace ought to have been pointed out as a historic titbit to the reader.

The next five chapters from Part 3 of the book, devoted to interference phenomena. Here also the material is discussed with deep insights, characteristic of researching minds. It is therefore a little disappointing that a reference is not made to the possibility of interference colours in soap bubbles. While the books of Tolansky are cited, an indication of the use of multiple beam interferometry for the very beautiful micros-

*Director, National Physical Laboratory, Dr. K S Krishnan Road, New Delhi-110012

copy of surfaces would have been welcome. Similarly I was hoping to see among the books, suggested for reading, P. Hariharan's classic book on Interferometry.

Fraunhofer diffraction, Fresnel diffraction and holography are treated in the next three chapters forming Part Four of the book. While historical anecdotes enliven the other parts of the book, some significant features could have been added here. In discussing X-ray diffraction (Section 16.9) one must mention that Lawrence Bragg accidentally observed that the spot moved by 2θ when the crystal rotated by θ , just like the reflection of light from a mirror. Then he derived the equation now called Bragg's law. The justification of the array of atoms acting like a mirror on the basis of the diffraction theory came later. In the meanwhile using the analogy of reflection from a mirror, William (Father) Bragg and Lawrence (son) Bragg developed the so-

called Bragg X-ray spectrometer. In discussing the diffraction by a circular disc (Section 17.8) it is worthwhile repeating the unexpected result of Poisson and the equally unexpected brilliant experiment of Arago, as mentioned in a footnote elsewhere (p. 450). Even today many people will find it difficult to believe that at the centre of the shadow of a circular disk there is a spot of light!

The electromagnetic character of light radiation is discussed in the three chapters of Part 5. Naturally one is able to consider under a unified theory a variety of optical effects, including polarization and related phenomena. While the author comes to introduce biaxial crystals (Section 19.10), he could have gone ahead a little to explain the internal and external conical refraction, again a very important chapter in the evolution of the wave theory of light due to Hamilton. A short chapter on photons constitutes Part 6. Another short chapter (Part 7) discusses la-

ser as sources of coherent light.

The final Part 8 contains an account of fibre optics and about five pages on speckle metrology. The part is entitled "some contemporary topics". In this category one could have added brief accounts of photon statistics and intensity interferometry as well as nonlinear optics. But then there is a limit to what can be included in a single book!

Overall it has been a pleasure to read the book. In most universities in India, the book would be an appropriate textbook at the MSc (Physics) level. The Publishers have done a good job of printing and proof reading. The binding however has given way in my copy; maybe it is the result of my reading the book page by page several times, which is a reflection of the interest created by the book! The remarks made earlier are in the nature of suggestions to make a good book an even better book. One wishes that there are more occasions to express such sentiments.

COMMUNICATION

Cleansing the Augean Stables

I entirely endorse Dr G.S. Balram Gupta's views expressed in his highly readable article "Cleansing the augean Stables" (*University News*, 12 April '93), with honourable exceptions granted. While one is aware of a creative artist at work in the article, it is not only a literary flourish. It is facts, bare and bold. We expect a campus to be an oasis of excellence, though in reality it is often a morass of molasses. If some of our best brains and model minds are like what Dr. Gupta describes, what hope for the country? Until a deep sense of integrity, initiative and involvement is inculcated in those desirous of working on the campus, the Augean stables will continue to overflow with dung and urine, conse-

quently vitiating entire existence.

S.V. Chindhade
Principal, M.V. College,
Pimpri-Pune. 411017

Translation — An Academic Discipline

This has reference to "Translation as a Literary Discipline" by A.L. Deshpande. (*University News*, May 10, 1993).

Translation is being considered by some as inferior to creative literature. But on rational thinking we can find that it is not so. Great Masters of literature were also great translators. Rabindra Nath Tagore translated his Bengali "Gitanjali" (not all poems in it) into English, for which he was awarded the prestigious Nobel prize.

Translation is being acknowledged in recent years as an important

activity and awards, even at international level are being given for them. And professional organisations are also there of translators. In the Indian multilingual context especially, translation has an important role to play, which is envisaged in the "Aadaan-Pradaan" programme of the Sahitya Akademi.

But translation is yet to be seriously considered as an academic discipline, as suggested by Shri A.L. Deshpande. The beginnings are already visualised here and there, on these directions. But seriousness is yet to be attached to this noble activity leading to linguistic, literary, emotional and cultural synthesis and integration. And there are many treatises on translation — both theory and practice, now.

N N Anandan

RESEARCH IN PROGRESS

A list of research scholars registered for doctoral degrees in Indian Universities

PHYSICAL SCIENCES

Mathematics

1. Naik, Udaykumar Hanumantrao. Topics in univalent and multivalent functions in geometric function theory Shivaji. Dr S R Kulkarni, Department of Mathematics, Willingdon College, Sengh.
2. Pandey, Umesh Kumar. A study of some topics related to various contractive type mapping in fixed point theory H S Gour. Dr R K Nandoo, Department of Mathematics, Dr Hansingh Gour Vishwavidyalaya, Sagar.
3. Patil, Vinayak Kallapa. On relativistic magnetofluid system in Einstein Cartan space time. Shivaji. Dr G G Asgekar, Department of Mathematics, Shivaji University, Kolhapur.
4. Patkar, Shyam. Fixed points of certain mappings. H S Gour Dr N K Jam, Department of Mathematics, Dr Hansingh Gour Vishwavidyalaya, Sagar.
5. Shrivastava, Arun Kumar. A study of some results in the fixed point theory H S Gour Dr R K Jam, Department of Mathematics, Dr Hansingh Gour Vishwavidyalaya, Sagar.
6. Shrivastava, Gajendra. Quasi injective modules. H S Gour Dr R S Singh, Department of Mathematics, Dr Hansingh Gour Vishwavidyalaya, Sagar.
7. Sjarifa, Anshu. A study of some topics related to various contractive type mappings in fixed point theorem. H S Gour. Dr R K Nandoo, Department of Mathematics, Dr Hansingh Gour Vishwavidyalaya, Sagar.
8. Singh, Chandra Prakash. Relativistic cosmological models. BHU Dr S Ram, Department of Applied Mathematics, Banaras Hindu University, Varanasi.
9. Soni, Plasma and fluid instabilities. HP Dr A C Sharma, Department of Mathematics, Himachal Pradesh University, Shimla.
10. Thorat, Shivaji Parasu. Topological and distributional aspects of some integral transforms. Shivaji. Dr M S Chaudhari, Department of Mathematics, Shivaji University, Kolhapur.
11. Tiwari, Narendra Kumar. A study of some topics related to fixed point theory. H S Gour. Dr R K Nandoo, Department of Mathematics, Dr Hansingh Gour Vishwavidyalaya, Sagar.
12. Verugopal, M. Graph numbering problems. Kerala. Dr S Madhavan, Head, Department of Mathematics, University of Kerala, Thiruvananthapuram.

Physics

1. Naiknaware, Laxman Dashrath. Studies on energy storage with rechargeable heterojunction solar cell employing semiconducting Cd (Se Te) septum, Shivaji. Dr S H Pawar, Department of Physics, Shivaji University, Kolhapur.
2. Soni, Ghanshyam Das. A study of gravitational instability of

magnetized plasma. Vikram. Dr R K Chhajlani, Reader, School of Studies in Physics, Vikram University, Ujjain.

Chemistry

1. Chaturve, Nagendra. Oxidation of thio-compounds with lead tetra-acetate. Vikram. Dr T C Sharma, Prof, School of Studies in Chemistry, Vikram University, Ujjain.
2. Chavan, Pravina Balasaheb. Synthesis of some new aziridine derivatives. Shivaji. Dr M B Deshpande, Department of Chemistry, Shivaji University, Kolhapur.
3. Gadave, Kisan Mahadeo. Studies on preparation of sintered mixed metal sulphide pellets and their use in photoelectrochemical cells. Shivaji. Dr P P Hankare, Department of Chemistry, Shivaji University, Kolhapur.
4. Kavtake, Bhanudas Parshuram. Studies on non-nucleotide linkers in stabilizing DNR complexes. Shivaji. Dr M M Salunkhe, Department of Chemistry, Shivaji University, Kolhapur.
5. Mali, Umesh Ganpatrao. Liquid-liquid extraction and separation studies of rubidium barium and lead with crown ethers. Shivaji. Dr B S Mohite, Department of Chemistry, Shivaji University, Kolhapur.
6. Sande, Amirhamza Rasul. Polymer supported reactions in organic synthesis. Shivaji. Dr M M Salunkhe, Department of Chemistry, Shivaji University, Kolhapur.
7. Thapak, Tulsi Ram. A kinetic study in the oxidation of some substituted phenols by chloramine-T in micellar system. Vikram. Dr S K Solanki, Reader, School of Studies in Chemistry, Vikram University, Ujjain.
8. Ubale, Vijaykumar Pandurang. Synthesis and characterization of high performance materials. Shivaji. Dr N N Maldar, Shivaji University Centre for Postgraduate Studies, Kolhapur.

Earth Sciences

1. Lali, S. Hydrogeology of a hard rock terrain in parts of Palghat District. Kerala. Dr V Narayanan Nair, Reader, Department of Geology, University of Kerala, Kariavattom.
2. Radhika, UP. Classification and genesis of graphite in Southern Kerala - Implications for fluid processes in granulites. Dr M Santhosh, Scientist, Centre for Earth Sciences, Askulam, Thiruvananthapuram and Dr Anson Sebastian, Scientist, Centre for Earth Sciences, Askulam, Thiruvananthapuram.
3. Stephen, Riya. Dispersion of minor and trace elements by stream sediments in tropical conditions - A geochemical model. Dr P T Roy Chacko, Lecturer, Department of Geology, University of Kerala, Kariavattom.

Engineering & Technology

1. Fardis, Masum. Knowledge based communication system.

BHU. Dr R. B Mishra, Department of Computer Engineering, Banaras Hindu University, Varanasi.

2. George, Mary. Neural networks in pattern storage. Kerala. Dr M Ramachandra Kaimal, Head, Department of Computer Science, University of Kerala, Thiruvananthapuram.

3. Prasad, Chandra Shekhar. Analysis & design of prefabricated roofing system. BHU. Prof B N Roy, Department of Civil Engineering, Banaras Hindu University, Varanasi and Dr V Kumar, Department of Civil Engineering, Banaras Hindu University, Varanasi

4. Sharma, Gopal. Some aspects of electric drive systems. BHU. Prof G Rajshankar, Department of Electrical Engineering, Banaras Hindu University, Varanasi.

BIOLOGICAL SCIENCES

Environmental Sciences

1. Nakata, Shailesh Shankar. Aquatic plants for industrial pollution control and resource recovery. Shivaji. Dr R K Trivedy, Y C College of Science, Karad

Biochemistry

1. Ambili, M. Metabolism of extra-cellular matrix macromolecules in mammary gland. Kerala. Dr P R Sudhakaran, Department of Biochemistry, University of Kerala, Kanavattom.

2. Bhaskar, Asha. Antidiabetic activity of medicinal plants. Kerala. Dr K Saraswathy Devi, Department of Biochemistry, University of Kerala, Kanavattom.

3. Biju Kumar, B S. Investigation on the anticancer activity of indigenous drugs. Kerala. Dr K Saraswathy Devi, Department of Biochemistry, University of Kerala, Kanavattom.

4. Chithra, K R. Effects of feeding unsaturated fatty acids on lipid peroxidation and consequent biochemical effects. Kerala. Dr T Rajamohan, Department of Biochemistry, University of Kerala, Kanavattom

5. Kodam, Kisan Malleshwar. Effect of environmental toxicants on hepatic microsomal mixed function oxidase system. Shivaji. Dr S P Govindwar, Department of Chemistry, Shivaji University, Kolhapur

6. Londhe, Vajjan Bhaskar. Toxic elements in leprosy. Shivaji. Dr S K Ahaley, Government Medical College, Miraj

7. Paul, Vrushal Bapusaheb. Biomass conversion : Immobilisation of (a) pronase (b) amylglucosidase (c) Acylase. Shivaji. Dr N B Paul, Department of Chemistry, Shivaji University, Kolhapur

Microbiology

1. Khedkar, Chandrasprakash Dattarao. Studies on the hypocholesterolemic effect of acidophilus milk. Shivaji. Dr R D Garge, Department of Microbiology, Rajaram College, Kolhapur

2. Shukla, Meeta. Biological variations of *Entamoeba histolytica*. BHU. Prof P C Sen, Department of Microbiology, Banaras Hindu University, Varanasi.

Botany

1. Bhamburdekar, Sharad Baburao. Germination studies in pigeonpea, *Cajanus cajan* L. Shivaji. Dr P D Chavan, Department of Botany, Shivaji University, Kolhapur

2. Deokate, Ramkumar Laxman. Studies on the fossil flora of

Thiruvananthapuram. Shivaji. Dr B A Vagstad, Department of Botany, Shivaji University, Kolhapur.

3. Desai, Nootin Shivaji. Cytogenetical studies in Indian *Urtica* species. Shivaji. Dr G B Dixit, Department of Botany, Shivaji University, Kolhapur.

4. Ghosvi, Nandab Anandias. Cytogenetical studies in winged bean *Psophocarpus tetragonolobus* (L.) DC. Shivaji. Dr G B Dixit, Department of Botany, Shivaji University, Kolhapur.

5. Gupta, N K. Study on physico-chemical characters of some ber, *Ziziphus maurandica* Lamk varieties, Pimpri (M P). H S Gour. Dr J P Patharya, Department of Botany, Government College, Hoshangabad (M P) and Dr T R Sahu, Department of Botany, Dr Harnam Singh Vishwavidyalaya, Sagar.

6. Katiwal, Dilip Narayanrao. Response of groundnuts, *Arachis hypogaea* L. to growth regulators. Shivaji. Dr P D Chavan, Department of Botany, Shivaji University, Kolhapur.

7. Mahamulkar, Suresh Haibatrao. Taxonomical studies in the fungi of India. Shivaji. Dr M S Patil, Department of Botany, Shivaji University, Kolhapur.

8. Mandal, Tej Narayan. Ecology of fodder trees. BHU. Prof K P Singh, Department of Botany, Banaras Hindu University, Varanasi.

9. Mane, Sumita, Sudhir. Physiological and cytological studies in lichens. Shivaji. Dr B A Hegade, Department of Botany, Shivaji University, Kolhapur.

10. Nadaf, Anaf-Husain Balchand. Studies on some fuel-wood species during nursery growth. Shivaji. Dr L J Bhosale, Department of Botany, Shivaji University, Kolhapur.

11. Shukla, Shru. Assessment of diversity in selected plant(s). BHU. Prof J S Singh, Department of Botany, Banaras Hindu University, Varanasi

12. Singh, Archana. Cytogenetics in Charophyta. BHU. Dr B R Chaudhary, Department of Botany, Banaras Hindu University, Varanasi.

13. Suresh Kumar, P K. Ethnobotanical investigation and search for pharmacodynamic compounds from wild orchids of western ghats. Kerala. Dr P Pushpangadan, Director, Tropical Botanic Garden and Research Institute, Palode and Dr P N Krishnan, Scientist, Tropical Botanic Garden and Research Institute, Palode

Zoology

1. Disale, Siddeshwar Dajiram. Coleopteran haemocytes. A comparative study. Shivaji. Dr G P Bhavane, Department of Zoology, Shivaji University, Kolhapur

2. Gurev, Chandrakant Ananda. Evaluation of insect parasitoids for biological control of some hairy caterpillars of economically important crops. Shivaji. Dr T V Sathe, Department of Zoology, Shivaji University, Kolhapur

3. Jadhav, Sambhaji Pandurang. The role of mouse submandibular gland in the postnatal development of male genital tract. Shivaji. Dr (Smt) M M Pillai, Department of Zoology, Shivaji University, Kolhapur.

4. Kanase, Ravindra Nandoo. Effects of Ayurvedic drugs on

the functional responses of liver and kidney after CC14 induced hepatic injury in albino rats. Shivaji. Dr (Smt) A A Kanase, Department of Zoology, Shivaji University, Kolhapur

Medical Sciences

1. Datta, Ambarish. Electrophysiology of brain. BHU. Dr R Patnaik, School of Biomedical Engineering, Banaras Hindu University, Varanasi

2. Kanunamay. Biotransport process. BHU. Dr R K Jha, School of Biomedical Engineering, Banaras Hindu University, Varanasi and Dr K N Rai, Department of Applied Mathematics, Banaras Hindu University, Varanasi.

3. Piplani, Poonam. Synthesis of some heterosteroids as potential neuromuscular blockers. Panjab. Prof D P Jindal, Department of Pharmaceutical Sciences, Panjab University, Chandigarh

4. Rai, Sanjay Kumar. Physiological fluid dynamics. BHU. Dr A

K Roy, Department of Biomedical Engineering, Banaras Hindu University, Varanasi and Dr K N Rai, Department of Applied Mathematics, Banaras Hindu University, Varanasi.

5. Singh, Babita. Synthesis and biological evaluation of novel aryloxypropylamines and related compounds. Panjab. Prof Dharam Paul Jindal, Department of Pharmaceutical Sciences, Panjab University, Chandigarh.

6. Srivastava, Sanjay. Medical expert systems. BHU. Dr R K Jha, School of Biomedical Engineering, Banaras Hindu University, Varanasi and Dr A K Agrawal, Department of Computer Engineering, Banaras Hindu University, Varanasi.

7. Surash, P. Design & evaluation of transdermal drug delivery system. Jadavpur. Prof B K Gupta.

8. Upadhyay, Ajay Kumar. Kalidas ki rachnas mein vanoushadhi vivechan. BHU. Dr S D Dubey, Institute of Medical Science, Banaras Hindu University, Varanasi

THESES OF THE MONTH

A list of doctoral degrees accepted by Indian Universities

PHYSICAL SCIENCES

Mathematics

1. Bhopinder Singh. Weighted composition operations on function spaces. Jammu. Dr R K Singh, Prof and Head, Department of Mathematics, University of Jammu, Jammu

2. Jajodia, Sina. Polynomial rings and power series rings. NEHU. Dr M B Rega, Reader, Department of Mathematics, North Eastern Hill University, Shillong

3. Rafiqueuddin. Purity and its allied topics in modules. AMU. Prof M Z Khan, Department of Mathematics, Aligarh Muslim University, Aligarh.

4. Randive, Abhay S. Approximation by positive linear operations. Ghasidas. Dr S P Singh, Head, Department of Mathematics, Guru Ghasidas University, Bilaspur.

Physics

1. Chopra, Neena. Electrical, optical and electron spin resonance studies on binary and doped transition metal oxide tellurite glasses and blown films. Delhi.

2. Jagjeet Kour. Studies on the mechanoluminescence of impurity doped (Zn Cd) mixed phosphors. Ravishanker. Dr M Elyas, Prof and Head, Department of Physics, Government Science College, Raipur.

3. Papper, Sunil. Electronic and magnetic properties of heavy fermions and mixed-valence systems. Roorkee.

4. Rahman, Md Hafizur. Laser Raman spectroscopic studies of

binary and ternary borate glasses. AMU. Prof B N Khanna, Department of Physics, Aligarh Muslim University, Aligarh.

5. Sarkar, Sukhendusekhar. Spectral distribution theory and strengths of Gamow-Teller and ml-excitations. Calcutta.

6. Solanki, Ashok Kumar. Electronic properties of some BCC transition metals. Roorkee

Chemistry

1. Aggarwal, Renu. Synthesis of some new heterocyclic compounds containing pyrimidine ring. Delhi.

2. Bhattacharyya, Mamsha. Studies on aquatic plants for the removal of toxic chemicals. Visva-Bharati.

3. Dham, Sumita. Synthesis and bioassay study of some heterocyclic compounds. Jammu. Dr C S Andotra, Reader and Dr T C Langer, Lecturer, Department of Chemistry, University of Jammu, Jammu

4. Eswan, V S. Studies on the synthesis of ionones, irones and related compounds. CUST. Dr Paul A Vatakencherry, Prof (Retd), Department of Applied Chemistry, Cochin University of Science and Technology, Kochi.

5. Gangwar, Tripti. Some organotin derivatives of N-(O-hydroxy substituted benzyl). Kumaon. Dr M Chandra.

6. Garg, Ravindra Kumar. Preparation and physicochemical characterization of transition metal dithiocarbamates and investigation on anti-cancer activity of the ligands. Delhi

7. Ghose Devi. Complexes of metal (II) carboxylates with cy-

studies of Rajghat Dam Project. HS Gour. Dr L P Choudhary, Reader, Department of Geology and Applied Geology, Dr H S Gour Vishwavidyalaya, Sagar.

8. Johns, Michael. Metal chelates of 1, 2, 3 - triketone-2-arylhdyratones. Calicut. Dr K. Krishnakutty, Lecturer, Department of Chemistry, University of Calicut, Calicut.

9. Kakati, Girindra Nath. Study of surface water pollution in greater Gauhati. Gauhati. Dr Krishna Gopal Bhattacharya, Reader, Department of Chemistry, Gauhati University, Guwahati.

10. Mohan, G. Catalysed redox reactions of some organic substrates and Cu (II) : A kinetic study. Kakatiya. Prof T Ravi Prasad, Principal, Arts and Science College, Kakatiya University, Warangal.

11. Narayanan, P. Electrooptical studies on metal phthalocyanines. CUST. Dr V N Sivasankara Pillai, Prof, Department of Applied Chemistry, Cochin University of Science and Technology, Kochi.

12. Pal, Bipad Bhattacharya. Studies on pesticidal properties of some organic compounds. Visva-Bharati.

13. Puri, Sujata. Synthesis, spectral studies and reactivity of disulphidothionitrato and nitrosyl complexes of osmium and rhodium. Devi Ahilya. Dr K K Pandey, Prof, Department of Chemistry, Devi Ahilya Vishwavidyalaya, Indore.

14. Ramana Reddy, Ch Venkat. Studies on transition metal chelates of some cyclic ketones in solution. Osmania.

15. Saha, Sanat Kumar. Studies of protease inhibitors from the seeds of plant family Cucurbitaceae. Calcutta.

16. Sarker, Shraboni. Studies on the enzymatic activity of yeast alcohol dehydrogenase hosted in reverse micelles. Delhi.

17. Sharma, Rakesh Kumar. Phytochemical investigations of *Piper* and *Prunus* species and synthetic spectral studies on some new pyrano 1, 3-diphenylprop-2-enones. Delhi.

18. Srinivas, N R. Synthetic studies in carbohydrates. Osmania.

19. Sun, Parvinder. Synthesis and characterization of some first row transition metal salicylhydrazides. Devi Ahilya. Dr M A Farooqui, Islamia Karamia College, Indore.

20. Venkateswara Rao, Chirravuri. Secondary metabolites of three Indian soft corals. Andhra.

Earth Sciences

1. Bora, Alam Shah. Some aspects of sedimentology of the recent sediments from the river Brahmaputra around Sibangar, Assam. Gauhati. Dr P K Das, Reader, Department of Geology, Gauhati University, Guwahati.

2. Sharma, Vijay Kumar. Petrological and geochemical study of Kal Nala granite, southeast of Thathri Doda District, Jammu Himalaya. Jammu. Dr B L Dhar, Reader and Dr Y P Gupta, Reader, Department of Geology, University of Jammu, Jammu.

3. Singh, Dinesh Kumar. Geotechnical and hydrogeological

studies of Rajghat Dam Project. HS Gour. Dr L P Choudhary, Reader, Department of Geology and Applied Geology, Dr H S Gour Vishwavidyalaya, Sagar.

4. Tiwari, Raghavendra Prasad. Palaeontological and stratigraphic studies of the Surma Group Rocks around Aizawl and Lunglei, Mizoram, India. Gauhati. Prof M N Rao, Department of Geology, Gauhati University, Guwahati and Dr G Berman, Senior Geologist, Geological Survey of India, Guwahati.

Engineering & Technology

1. Abbas, Husain. Dynamic response of structures subjected to missile impact. Roorkee.

2. Al-Rawi, Hisham Sherif Abdullatif. Modelling of surface acoustic wave signal processing devices. Roorkee.

3. Anil Kumar. Studies of nucleate pool boiling heat transfer from horizontal finned tubes to saturated liquids. Roorkee.

4. Basu, Manaskumar. Electron behaviour in semiconductor structures of submicron dimensions. Calcutta.

5. Gupta, Phool Chand. Electrochemical wire cutting process (ECWCP). Experimental feasibility and process analysis. Roorkee.

6. Gupta, Vijay Laxmi. Design and analysis of optical waveguides and waveguide polarizers. Delhi.

7. Halder, Chandan. Dynamical and type 2 characterizations of ideal basis reduction in symbolic algebraic computation. IISc.

8. Joshi, Nutan. Optical waveguiding and electrical properties of polyurethane coatings. Delhi.

9. Kuanr, Bijoy Kumar. High power microwave : Electric and magnetic studies of substituted lithium ferrites and Gd-YIG. Delhi.

10. Mahajan, Meenakshi. Performability analysis of multidisk systems. Delhi.

11. Majumdar, Nilrajan. Studies on the dependence of D C and microwave properties of IMPATT diodes on the electron and hole saturation currents entering the depletion layer. Calcutta.

12. Mathur, Tribhuvan Nath Singh. Energy conservation studies for the multiple effect evaporator house of pulp and paper mills. Roorkee.

13. Omran, Mohammad Esmail Nia. Roller compacted concrete for dams. Roorkee.

14. Sharma, Anuradha. Analysis and design of efficient parametric techniques for surface generation. Delhi.

15. Siddiqui, Mohammad Altamush. Optimisation of operating parameters for various absorption systems using renewable energies. AMU. Prof E A Nizami.

16. Singh, Mukesh Pratap. Study of multilayer optical waveguide devices with loss or gain. Delhi.

EDUCATION NEWS INDEX

A list of select articles and editorials on education from newspapers received in the
AIU Library during May 1993

EDUCATIONAL PHILOSOPHY

Nandakumar, Prema. Deny your family! The Hindu 18.5.93.

Singh, R P. How relative is good education. The Hindu 4.5.93

EDUCATIONAL PSYCHOLOGY

ACADEMIC PRESSURES (Editorial). Indian Express 4.5.93

Ramakrishnan, Jashri. Creativity Vs IQ. The Hindu 11.5.93.

Sobhani, Syed Zarir. Oxford mysteries. The Assam Tribune 23.5.93.

EDUCATIONAL SOCIOLOGY

Karat, G R. SC judgement & minority institutions. Deccan Herald 24.5.93

EDUCATIONAL POLICY & PLANNING

Bedi, Ramesh. "We enjoyed it a lot". The Pioneer 23.5.93

Bhagat, Rasheeda. Education for all TN picks up the challenge. Indian Express 19.5.93

Mohan, Sadhna. Going back to the Gurukuls The Pioneer 23.5.93

Nageswar Rao, C. Need for a national youth policy. Deccan Chronicle 14.5.93

PRIMARY MISSION (Editorial). Indian Express 11.5.93

PUNJAB ON the march (Editorial). The Hindustan Times 12.5.93

QUALITY EDUCATION (Editorial). The Hindustan Times 22.5.93

Rajput, J S Learning to focus on basic education. The Times of India 29.5.93

Ray, Ash Naram. Operation blackboard - Tardy progress due to states' lack of interest. The Hindustan Times 31.5.93.

Saini, Alka. Education without purpose. The Tribune 9.5.93

TOWARDS A better quality of life (Editorial). National Herald 24.5.93.

Venkatasubramanian, K. NEP . Looking to the next century The Hindu 25.5.93

EDUCATIONAL ADMINISTRATION

Ambarajan, S Political economy of new varsity. The Hindu 22.5.93

Amrik Singh. Trends in enrolment. Deccan Herald 22.5.93

_____. Universities : Crisis of credibility. The Hindustan Times 13.5.93.

Ashraf, Ejaz. Noots tightens : Delhi University feels the heat. The Pioneer 16.5.93.

Banerjee, Benodini S. The horror of the CBSE juggernaut. Indian Express 27.5.93.

Baxi, Upendra. Crisis in Delhi University. Patriot 25.5.93

Bhushan, Ranjit. School for scandal. Indian Express 30.5.93.

CALL THE bluff (Editorial). Deccan Herald 22.5.93.

Deb, Mira. Blackboard irrelevance. The Telegraph 26.5.93.

Duramajan, T M. The challenges of autonomy. The Hindu 18.5.93.

George, Thomas Capitation fee institutions not necessary The Hindu 4.5.93.

Gundu Rao, N C. Fee for all. Deccan Herald 8.5.93

HOW TO fund universities (Editorial). The Pioneer 10.5.93.

Hurra, Sonia. CP Act is the need of the hour. Indian Express 10.5.93.

INDIGENT COLLEGES (Editorial) The Hindustan Times 20.5.93

IRREGULAR ADMISSIONS (Editorial). The Assam Tribune 9.5.93.

Madan Mohan. DU has never been in such bad shape. The Times of India 20.5.93.

Mahajan, V S. PU status at stake. The Tribune 6.5.93.

Malik, Divya. The man behind paper leaks. The Pioneer 16.5.93.

Prahlad Kumar. Accountability in education. The Assam Tribune 16.5.93.

QUESTION OF priority (Editorial). The Hindustan Times 10.5.93

Ramadas, Jayashree. Imagined stereotypes. The Economic Times 22.5.93

ROT IN Delhi University (Editorial). Indian Express 14.5.93

Rudrappa, Y P. Seat and sour. Deccan Herald 8.5.93.

Sangal, P S. Feat of social engineering by apex court. The Hindu 4.5.93

Sarma, Kanak Chandra. Anandoram Barooah gold medal. The Assam Tribune 21.5.93.

SCHOOL SANCTIONS (Editorial). Deccan Herald 21.5.93.

Vedantam, Vatsala. The Supreme Court judgement and after . Professional juggling. Deccan Herald 7.5.93.

_____. When admission procedures are violated : Justice in the balance. Deccan Herald 13.5.93.

WAGES OF neglect (Editorial) National Herald 22.5.93.

WHAT THE Supreme Court had to say (Editorial). Deccan Herald 8.5.93.

EDUCATION & POLITICS

KERALA SCHOOLS (Editorial). Patriot 3.5.93.

PLAYING WITH education (Editorial). The Assam Tribune 5.5.93

CURRICULUM

Mukherji, Kingdank A monster called mathematics. The Telegraph 3.5.93.

Natarajan, P N and others. Search for talent in mathematics. The Hindu 11.5.93.

Sikes, O J. Sex education via self-esteem. National Herald 16.5.93

Venkataraman, D. Making geography interesting. The Hindu 11.5.93

LANGUAGE & LANGUAGE POLICY

ENGLISH, AN asset (Editorial). The Hindustan Times 18.5.93.

SCIENCE EDUCATION

Ambrarajan, S. The mandarins of science. The Economic Times 9.5.93.

Chandrasekharan, K S. The freedom to say "Eureka!" Deccan Herald 1.5.93.

Jayarajan, Kunthala. Science, technology and university An inverse pyramid? The Hindu 16.5.93.

Kashyap, Tara. Down to earth space man. Deccan Herald 2.5.93

Nitya Nand. Have our scientists failed? The Hindu 9.5.93

Natarajan, R. Draft for a new technology policy The Hindu 11.5.93

SCIENCE AND technology (Editorial) National Herald 22.5.93

VOCATIONAL EDUCATION

Amrik Singh. Technical education in the doldrums The Times of India 29.5.93

Bhattacharyya, Sourish and others. The great information barrier Indian Express 8.5.93.

Chamaraj, Kathayini. Know how, more than know what. Deccan Herald 22.5.93

D'souza, Lajwanti. Professional courses A secure future, job prospects after the degree. The Times of India 29.5.93

Dutt, Sushil. Delhi Univ professional courses open up career choices. The Pioneer 27.5.93

Mahajan, Krishan. Making lawyers accountable. Indian Express 10.5.93

Puranik, Basavaraj. Wanted Designer engineers Deccan Herald 15.5.93

Ramachandran, R. Technical institutions Bridging the engineering gap. The Economic Times 22.5.93

Ryan, J A. Quite a job ahead. Deccan Herald 15.5.93

Saraph, Manjuri. New kids on the board. Deccan Chronicle 17.5.93

DISTANCE EDUCATION

THE PROMISE of open learning (Editorial) The Hindu 12.5.93

Prasad, Ravi R. Open university enters confined preserves The Statesman 10.5.93

TEACHERS & TEACHING

Batra, Tripta. A quiet revolution. The Times of India 2.5.93

Kakkar, N K. Should college teachers be appointed on a short-term basis? The posts will create more 'slaves'. Indian Express 10.5.93

Kandlikar, R K. Should college teachers be appointed on a short-term basis? The staff should be wended out. Indian Express 10.5.93.

Manon, Anjana. Teaching for some spare time. The Pioneer 16.5.93

ON TEACHER education (Editorial). National Herald 22.5.93

Parameswaran, E G. Students suffer Conflict between teaching and research. Deccan Chronicle 30.5.93.

Ramadoss, Haripriya. Banish boredom from classrooms. The Hindu 23.5.93

COUNSELLING & GUIDANCE

Mukherji, Kingdank. Counselling with care. The Telegraph 17.5.93

Rao, Ch Sunheel. Deciding your future. Deccan Chronicle 24.5.93

EDUCATIONAL TECHNOLOGY

Natarajan, Ganesh. Watch out before enrolling The Times of India 29.5.93

PASS CLASS (Editorial). The Times of India 10.5.93

Sen, Ruma J. Buzzing with the computer The Statesman 8.5.93

Shanker, Hema. Hi-tech holidays. The Hindu 15.5.93.

EDUCATIONAL EVALUATION

Mojumdar, Modhumita. When the examination fever is on. The Statesman 23.5.93

SSC RESULTS (Editorial). Deccan Chronicle 12.5.93

ECONOMICS OF EDUCATION

Agrawal, Damodar. Learning by degrees. The Pioneer 9.5.93

Price of an American degree. The Hindu 23.5.93

Albrecht, D and Ziderman, A. Democratising high education. The Economic Times 19.5.93

Atma Ram. Question of funding education The Tribune 11.5.93

Bhatia, D P. Jobs and cost of new policy Patriot 18.5.93

Gill, P P S. "Frustrated" scientists going abroad The Tribune 12.5.93.

Malhotra, Babita. An unending queue. The Times of India 16.5.93

Mani, V R. Dubious distinction. The Times of India 16.5.93

Misra, Paromita. Waiting for the big axe to fall The Economic Times 2.5.93

Samath, P. Mounting global joblessness. Patriot 26.5.93

Sukumaran, Reeni. Job market. Patriot 15.5.93

Thomas, C P. Union power wanes as jobs grow scarce. The Economic Times 2.5.93

LIBRARIES & BOOKS

Basu, Chitralekha. Misadventure with books The Telegraph 29.5.93

Mehra, Payal. Books you can bite, chew and read. The Times of India 4.5.93.

Mojumdar, Modhumita. Good story books for the young. The Statesman 9.5.93

DR. B.R. AMBEDKAR OPEN UNIVERSITY

6-3-645, SOMAJIGUDA, HYDERABAD - 500 482.

Advt. No. 1/1993

Dated: 11th June, 93.

APPLICATIONS ARE INVITED IN THE PRESCRIBED FORM FOR THE FOLLOWING ACADEMIC, ADMINISTRATIVE AND TECHNICAL POSTS IN THE UNIVERSITY SERVICE SO AS TO REACH THE REGISTRAR ON OR BEFORE 5 00 P M ON JULY 7, 1993.

Department	Professor	Associate Professor	Assistant Professor	Academic Assistant
TEACHING POSITIONS				
A) GROUP - I :				
Hindi	—	—	1	—
Urdu	—	—	1	—
Commerce	—	—	1	1
Political Science	—	1	—	—
Economics	—	1	—	—
History	1	—	—	—
Sociology	—	—	1	—
Library Science	—	1	—	—
Business Management	—	—	—	1
Social Sciences	—	—	—	2
				(MA & M.C.J.)
Faculty of Arts	—	—	—	1
Editor/Professor of English	1	—	—	—
Assistant Librarian	—	—	1	—
B) GROUP - II :				
Botany	—	—	1	—
Chemistry	—	1	—	—
Geology	—	—	1	—
Physics	—	—	1	—
Zoology	—	1	—	—
Mathematics	—	—	1	—
Computer Science	—	—	1	—
Biological Sciences	—	—	—	1
Physical Sciences	—	—	—	1
C) GROUP - III :				
(AUDIO - VISUAL)			No. of vacancies	
Professor Cadre - Technical Director			1	
Assoc Prof Cadre - 1 Dy Director/Assoc. Professor			1	
2 Technical Officer			1	
Senior Technical Assistant			1	
Camerman			1	
(COMPUTER SCIENCE)				
Asst. Prof Cadre - Programmer			1	
ADMINISTRATIVE & TECHNICAL POSTS				
Assistant Registrar			1	
Documentation Assistant (Library)			1	
Assistant Public Relations Officer			1	
Engineering Works Supervisor (Civil)			1	
Technician (Printing)			1	

SCALE OF PAY

1 Professor/Editor	Rs 4500-150-5700-200-7300- (UGC)
2 Associate Professor	Rs. 3700-125-4950-150-5700- (UGC)
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6 Documentation Assistant	Rs 1810-70-2510-80-3230
7 Technical Director (A.V.)	Rs 1500-60-1800-100-2000 (UGC Un-Revised)
8 Technical Officer (A.V.)	Rs 1100-50-1600 (UGC. Un-Revised)
9 Senior Technical Asst. (A.V.)	Rs 1010-35-1360-40-1800
10 Camerman (A.V.)	Rs 1280-50-1780-60-2440
11 Assistant Registrar	Rs 1980-80-2780-90-3500

12 Assistant Public Relations Officer	Rs. 1550-70-2250-80-3050
13 Engineering Works Supervisor (Civil)	Rs. 1330-60-1930-70-2630
14 Technician (Printing)	Rs. 1100-40-1500-50-2050

NOTE :-

- 1 All posts carry D.A., H.R.A. & C.C.A. as per University rules
- 2 Age limit does not apply to the employees of this University
- 3 The upper age limit is relaxable by 5 years in the case of SC, ST & BC Candidates.
- 4 Reservations prescribed by the State Government for S.C./S.T./B.C. including Group-wise allotment and backlog of posts for S.C. and S.T. candidates will be followed. Details of this along with number of posts vacant indicating reservation category can be had with the application form
- 5 In case candidates with relevant qualifications and specialised experience are not available, the University reserves the right to consider the applications of the candidates from other categories

The prescribed applications forms and full particulars, experience, reservation categories etc., for these posts can be had after 16th June, 1993 in person from the Officer of the Registrar, Dr. B.R. Ambedkar Open University, 6-3-645, Somajiguda, Hyderabad - 500 482 on payment of Rs. 10/- (Rupees Ten only) by crossed Demand Draft/Indian Postal Order drawn in favour of the "Registrar, Dr. B.R. Ambedkar Open University" and payable at Hyderabad OR by post by sending a self-addressed envelope of size 24 cms & 11 cms duly affixing postage stamps worth Rs. 4/- (Rupees Four only) along with a crossed Demand Draft/Indian Postal Order drawn in favour of the "Registrar, Dr. B.R. Ambedkar Open University" for Rs. 10/- (Rupees Ten only) payable at Hyderabad. Such a requisition should be sent in an envelope superscribed "Request for application for the post of _____"

If only the particulars of qualifications, experience and number of posts under reservation category etc., (without Application Form) are required, candidates may send a self-addressed envelope affixing postage stamps worth Rs. 2/- (Rupees Two only) to the Registrar of the University. No Application will be supplied after 5 p.m., July 7, 1993 the last date for submitting application.

The University reserves the right to fill any or all the above posts if the circumstances so warrant. The University reserves to itself the right to appoint candidates to posts lower than the posts applied for.

C.N.V. Subba Reddy
REGISTRAR

NOTE : "Candidates who applied in response to this University's advertisement dated 8.3.1990, 23.8.1990 and 26.8.1991 for the posts of Computer Programmer, and Assistant Professor in Mathematics and in Computer Science are required to apply afresh"

COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH **(Human Resource Development Group)**

Advertisement No. SRF/RA-EMR-I/93

This is to bring to the attention of all concerned that CSIR has invited applications for awarding Senior Research Fellowship and Research Associateships vide an advertisement appearing in 19.6.93 issue of Employment News. Eligibility conditions and application proforma are published alongwith the advertisement. The application form may be cut out or copied from advertisement and used.

The last date of receiving applications is 30.7.93. The application duly completed in all respects should be sent to the Deputy Secretary, Extramural Research Division, Human Resource Development Group, CSIR Complex, Dr. K.S. Krishnan Marg, Pusa, N.P.L. Campus, New Delhi - 110 012.